

"I've got wings!"



Published by the U. S. Army Air Forces, Office of Flying Safety

K9

2-



"I've got wings!"



Foreword

FOR CENTURIES man looked longingly at the skies. Finally, some forty years ago, at Kill Devil Hill, near Kitty Hawk, North Carolina, Orville and Wilbur Wright successfully completed the first mechanical flight.

Today, thanks to the Wright brothers, man can fly. The Air Age is here! Thousands of military and commercial airplanes are speeding across the country on well-defined, carefully regulated airways. Air routes are reaching across every continent, into every corner of the world. No place on the globe is now more than 60 flying hours from your nearest air field.

As aviation comes of age air traffic is becom-

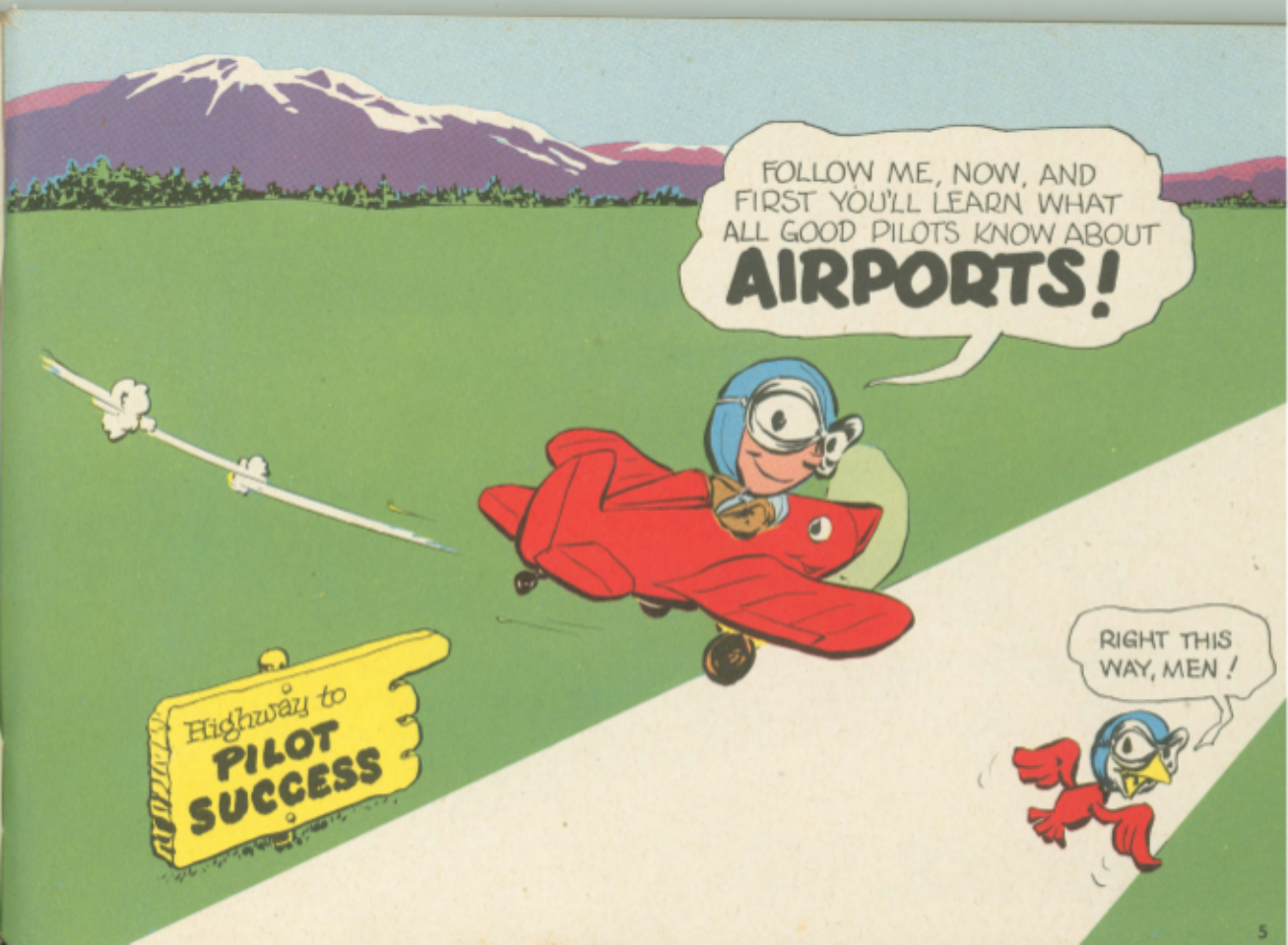
ing more and more of a problem to pilots. Uniform rules and regulations are necessary to insure maximum safety in flight.

To the young men of America whose hearts are in the sky, we present this booklet. Its pictures teach the rules that every pilot must know before he can earn his wings. Learn what this booklet has to tell and you will have taken a long step toward the day when you can say, "I've Got Wings."



Art ideas for this booklet were contributed by personnel of the Air Traffic Control Division of the Civil Aeronautics Administration. "I've Got Wings" was prepared and published by the U. S. Army Air Forces, Flight Control Command.





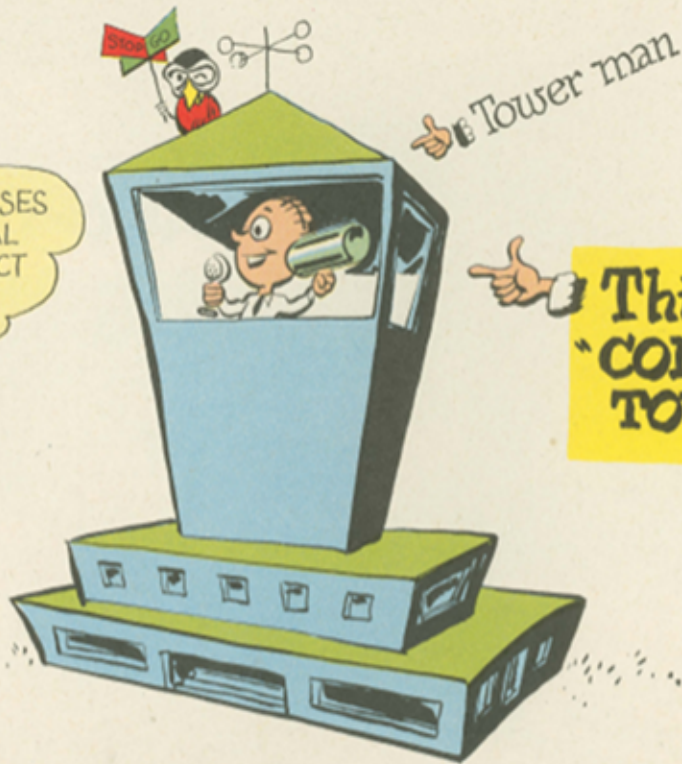
FOLLOW ME, NOW, AND
FIRST YOU'LL LEARN WHAT
ALL GOOD PILOTS KNOW ABOUT

AIRPORTS!

Highway to
**PILOT
SUCCESS**

RIGHT THIS
WAY, MEN!

THE TOWER MAN USES
RADIO AND VISUAL
SIGNALS TO DIRECT
TRAFFIC AT THE
AIRPORT



This is a
**"CONTROL
TOWER"**

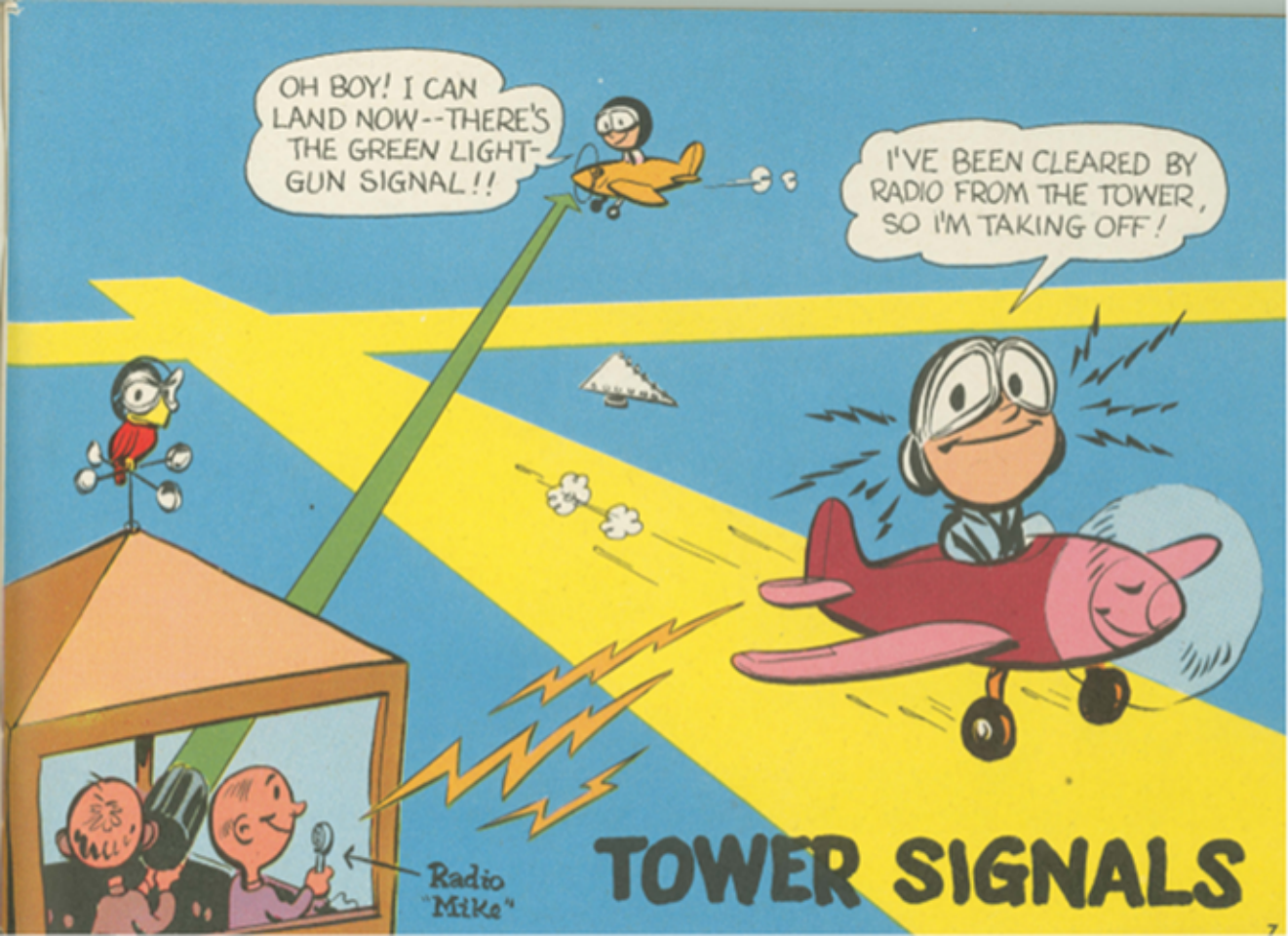
CONTROL TOWER

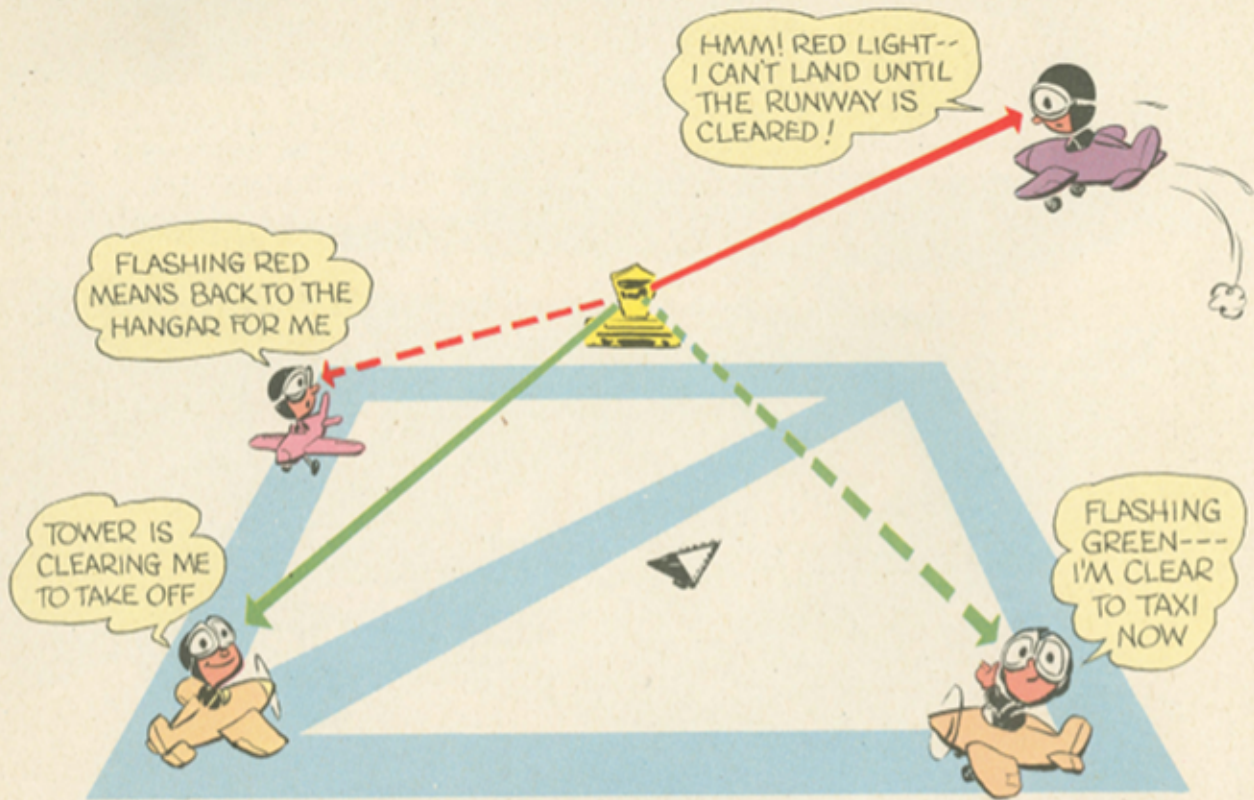
OH BOY! I CAN
LAND NOW--THERE'S
THE GREEN LIGHT-
GUN SIGNAL!!

I'VE BEEN CLEARED BY
RADIO FROM THE TOWER,
SO I'M TAKING OFF!

Radio
"Mike"

TOWER SIGNALS





CONTROL TOWER

GREEN LIGHT TO ME--
I'M COMIN' IN FOR
A LANDING



HEY! THAT'S THE **EMERGENCY
WARNING SIGNAL**-- FLASHING
RED AND GREEN!! I GOTTA
WATCH OUT--SUMP'N'S WRONG!



OH! RED LIGHT!
I MUST HOLD--
CAN'T TAXI!



I MUST GET
OFF THE
RUNWAY--I
CAN'T TAKE
OFF!



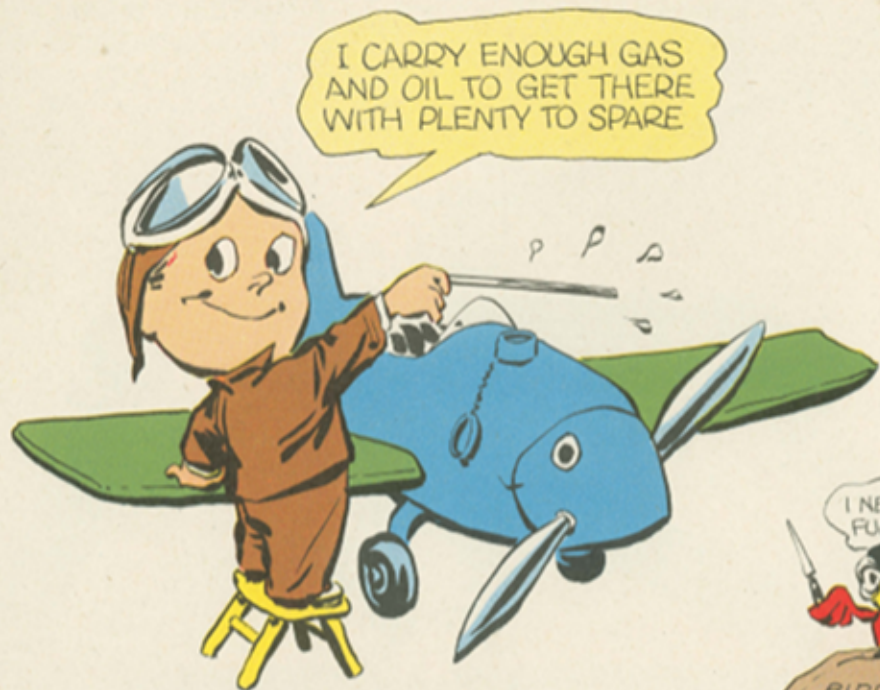
I GOTTA STOP
TAXIING
IMMEDIATELY!



IT'S ALL SO SIMPLE
WHEN YOU KNOW TH' RULES



LIGHT GUN SIGNALS



FUEL SUPPLY

HEY, CHUMP! DON'T EVER
CRANK A SHIP UNLESS SOME
GUY'S IN THE BUS AND THE
BRAKES ARE SET-- OR YOU
HAVE CHOCKS UNDER THE WHEELS!

Galloping Goldfish!
I'M FREE!

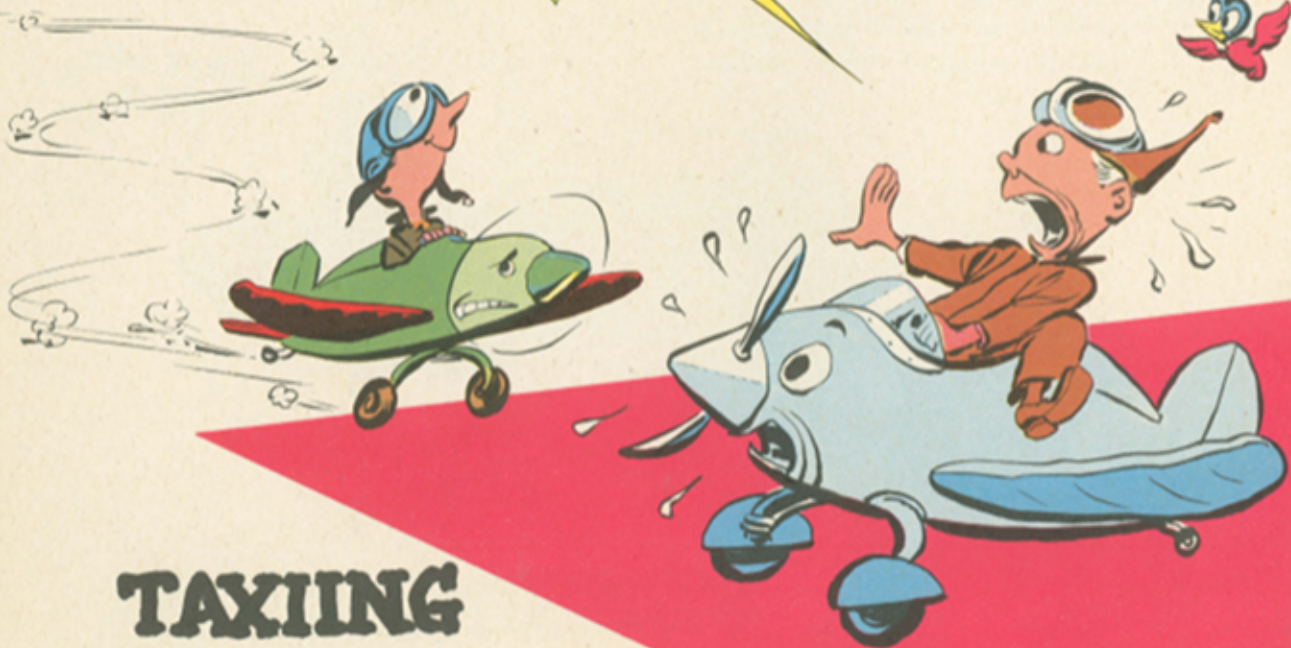
CONK!

TSK! TSK! HE SHOULD'A
USED THESE CHOCKS!

STARTING RULE

WHOA! WATCH WHERE
YOU'RE TAXIING
THAT PLANE, JERK !!!

POOR BOOB! IF HE MISSES
THE PLANE, HE'LL PROBABLY
SMACK INTO THE HANGAR--
HE SHOULD PAY ATTENTION!!



TAXIING

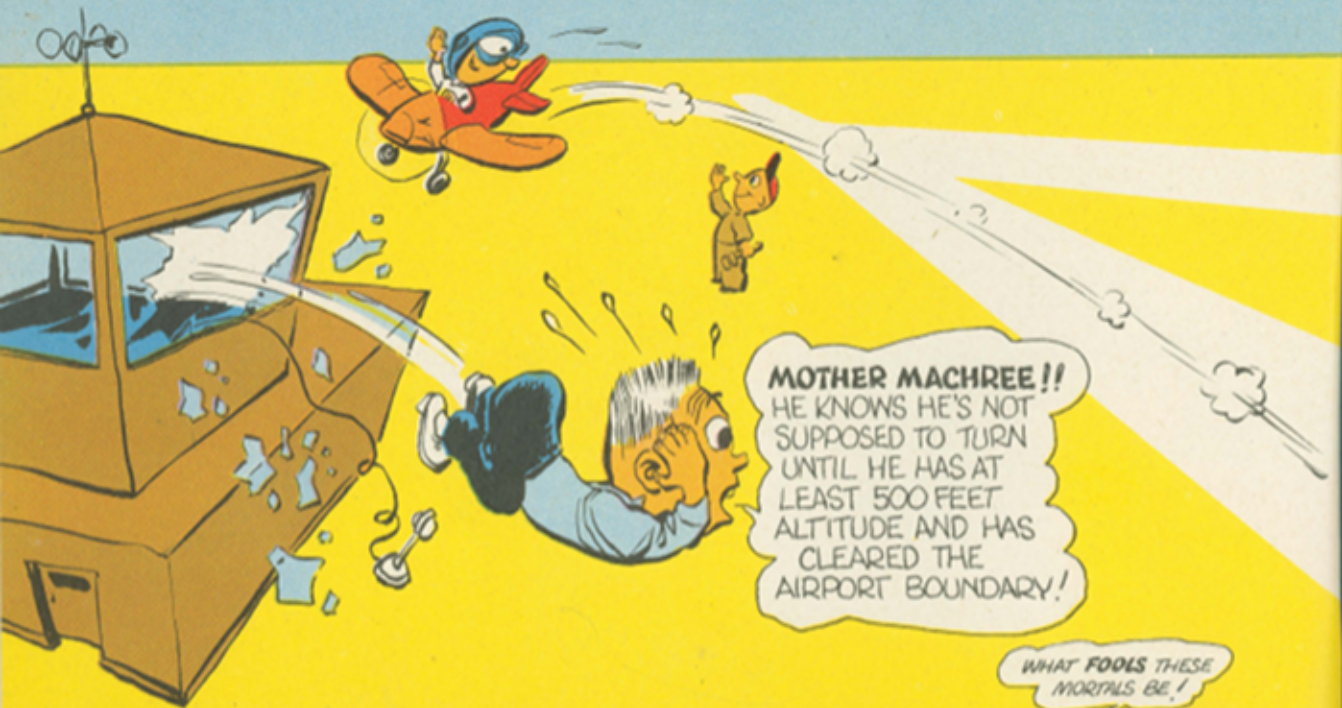
I HATE TO BE CRITICAL, BUT
YOU'RE VIOLATING A TAKEOFF
RULE: ALWAYS BE SURE YOU
HAVE A CLEAR RUNWAY!

I WONDER IF MYRTLE
PAID MY INSURANCE
FER LAST MONTH---

SMACK!

SOME GUYS NEVER LEARN!

The TAKEOFF



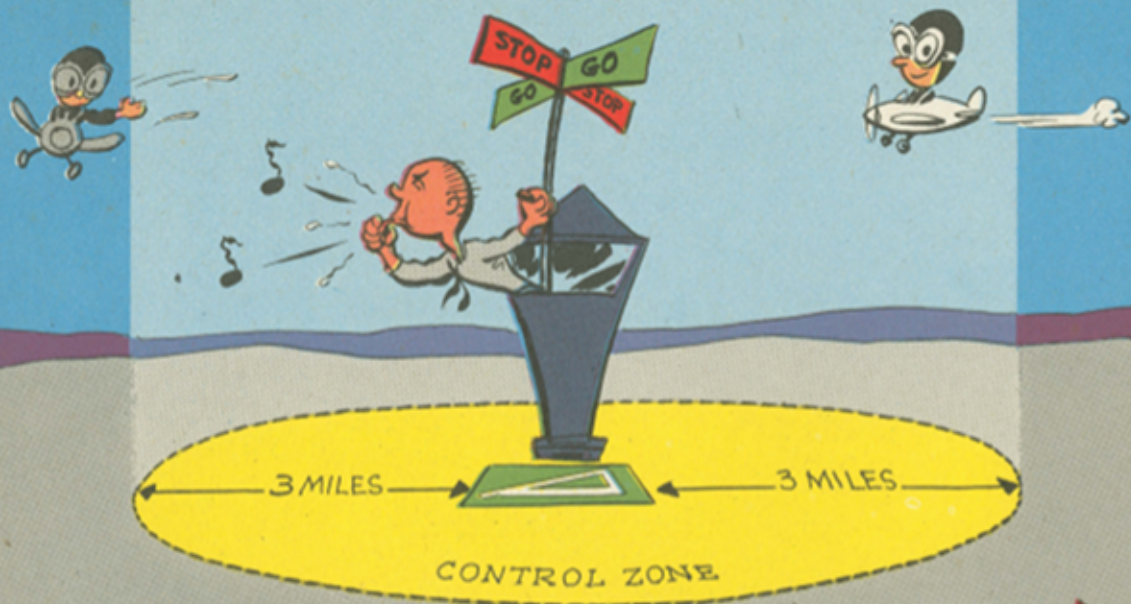
TURN AFTER TAKEOFF

THE RULE BOOK SEZ:
CIRCLE TO THE **LEFT**
UNLESS THE TOWER
MAN INSTRUCTS ME
OTHERWISE



ATTABOY!

CIRCLING the AIRPORT



THE TOWER MAN IS
THE BOSS MAN IN
THE CONTROL ZONE

The CONTROL ZONE



Overcast

1000 Feet

3 Miles

I GOTTA HAVE AT LEAST A 1000 FOOT CEILING AND 3 MILES FORWARD VISIBILITY TO FLY IN A CONTROL ZONE, UNLESS I HAVE SPECIAL PERMISSION

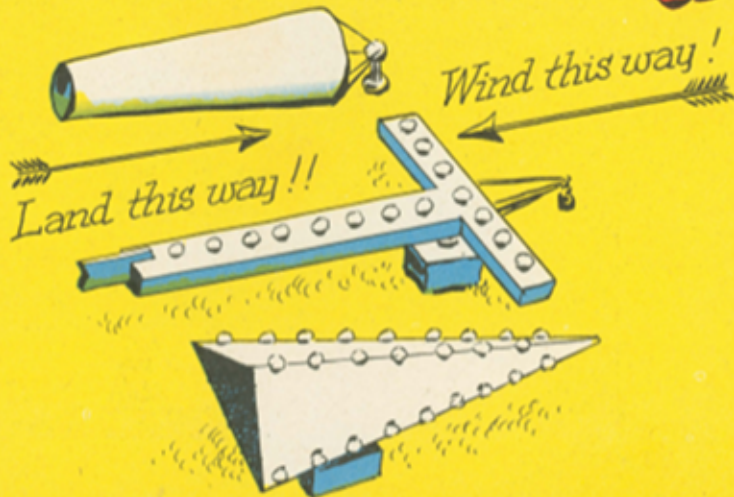
3 Mile Radius

CONTROL ZONE *Minimums*

I ALWAYS LAND **INTO**
THE WIND--WIND MARKERS
TELL ME WHICH WAY THE
WIND IS BLOWING



YOU MAY NOT SEE ALL
THESE AT ANY ONE AIRPORT--
BUT BE SURE AN' WATCH THE
MARKER SO YOU'LL KNOW
WHICH WAY TO LAND

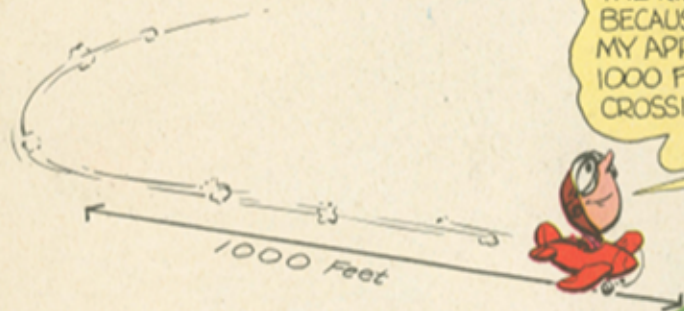


AIRPORT WIND MARKERS





HOLD IT, BOYS! I GOT
THE RIGHT-OF-WAY ---
BECAUSE I STARTED
MY APPROACH AT LEAST
1000 FEET BEFORE
CROSSING THE AIRPORT
BOUNDARY



APPROACH LEG

REMEMBER! START YOUR
APPROACH AT LEAST 1000 FT.
FROM AIRPORT BOUNDARY
TO HAVE RIGHT-OF-WAY
IN LANDING!



1000 Ft.

I ALWAYS KEEP TUNED TO THE
TOWER FREQUENCY UNTIL I'VE
EITHER PARKED THE SHIP OR
HAVE LEFT THE CONTROL ZONE

INSTRUCTIONS INSTRUCTIONS

INSTRUCTIONS

INSTRUCTIONS

It comes
out here

GET HEP TO THE TOWER
MAN'S JIVE-- STAY ON HIS
BEAM AND YOU WON'T
GO WRONG!

TOWER INSTRUCTIONS



AIRPLANES AND
ROTORPLANES -- THAT'S
US! WE HAVE RIGHT-
OF-WAY **No. 4**



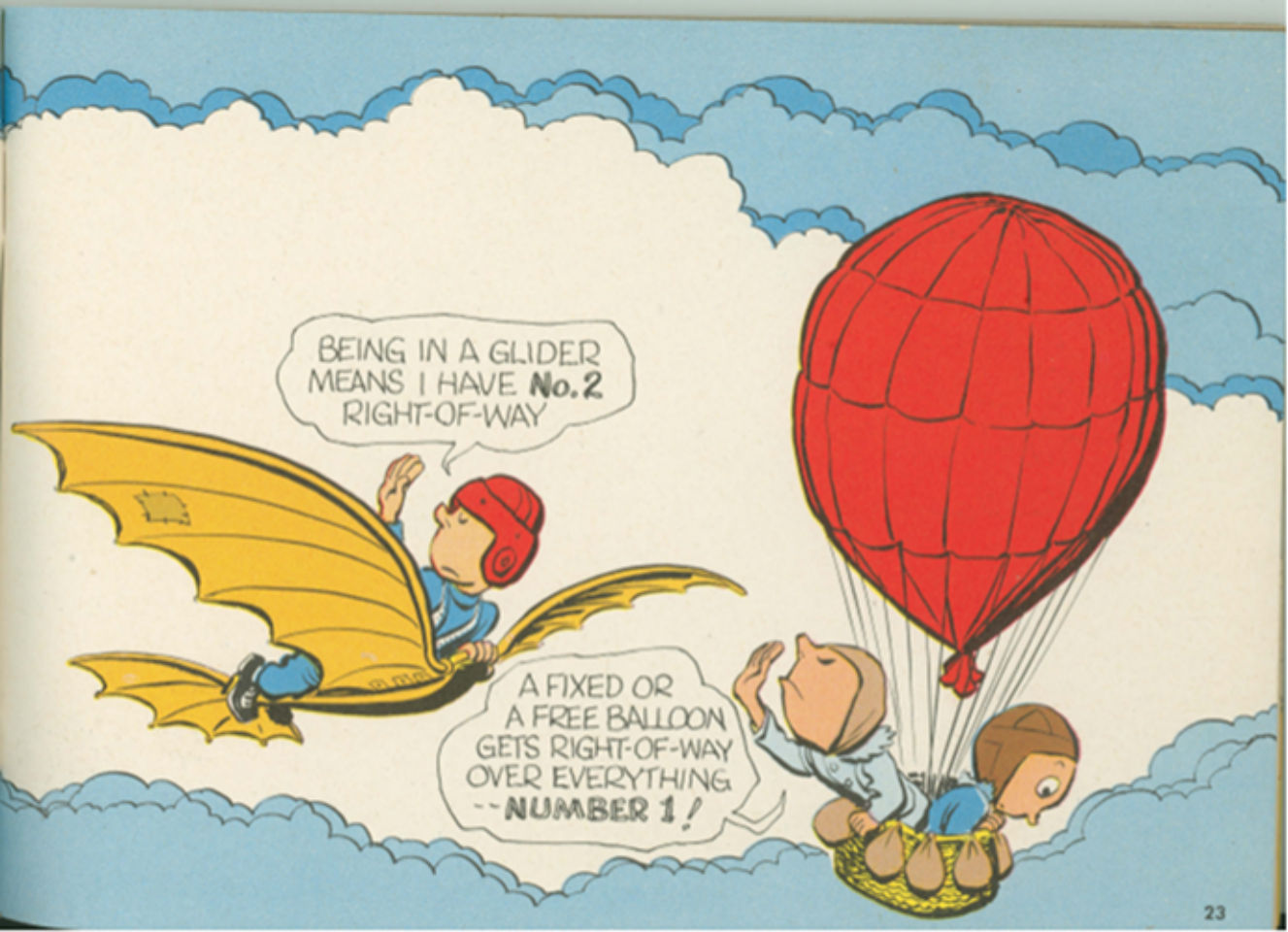
THE AIRCRAFT THAT CAN
CONTROL ITS MOVEMENTS THE
MOST GIVES WAY TO THE ONE
THAT CAN CONTROL ITSELF THE
LEAST -- DO YA KETCH ON?



I'M FLYIN' AN
AIRSHIP -- THAT GIVES
ME THE **No. 3**
RIGHT-OF-WAY



AIRCRAFT RIGHT-OF-WAY



BEING IN A GLIDER
MEANS I HAVE **No. 2**
RIGHT-OF-WAY

The illustration shows a boy in a blue suit and red helmet flying a yellow glider on the left. On the right, a family of three is in a wicker hot air balloon basket suspended by a large red balloon. The boy in the glider is looking towards the balloon with a determined expression. The family in the balloon is looking up at him. The background consists of a blue sky with white and blue clouds.

A FIXED OR
A FREE BALLOON
GETS RIGHT-OF-WAY
OVER EVERYTHING
-- **NUMBER 1!**

I GOTTA ALTER MY COURSE
TO THE RIGHT TO PASS AN
OVERTAKEN AIRCRAFT AT A
DISTANCE OF 500 FT. OR MORE

I GOT THE
RIGHT-OF-WAY!

500 Ft.

IT'S DANGEROUS
TO PASS TOO
CLOSE!

OVERTAKING *Right-of-way*

I MUST GIVE WAY
TO STAY 500 FEET
FROM A PLANE THAT'S
APPROACHING FROM
THE RIGHT!

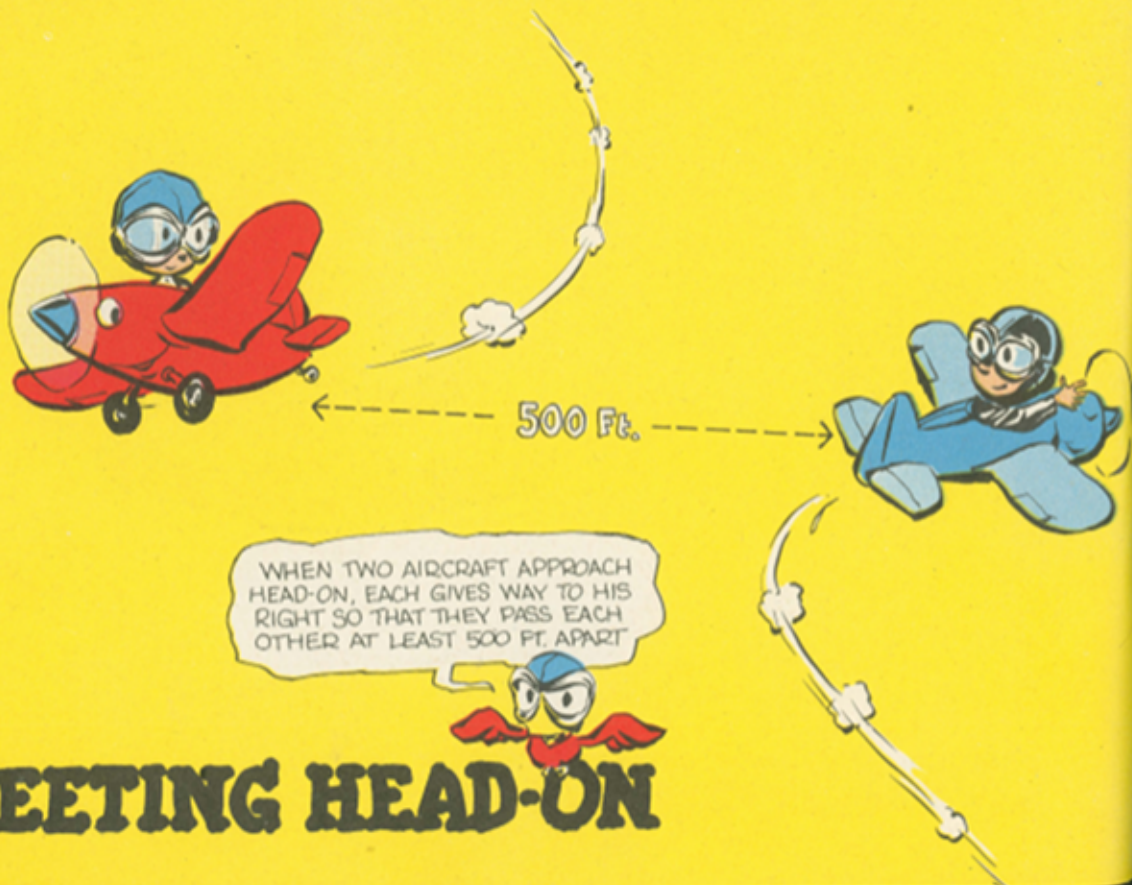
YOU'RE ON MY LEFT,
SO I HAVE THE
RIGHT-OF-WAY

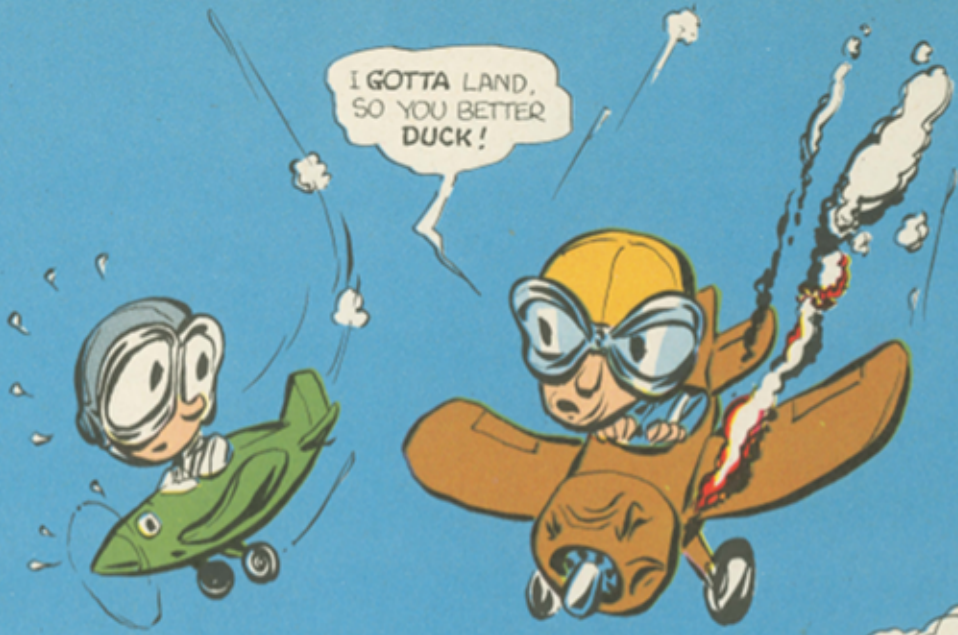
500 Ft.

SCREECH!*

SCRAM, BUD! I GOT
TH' RIGHT-OF-WAY!

CROSSING *Right-of-way*





I GOTTA LAND,
SO YOU BETTER
DUCK!

EMERGENCY LANDINGS
ALWAYS HAVE RIGHT-OF-WAY!



EMERGENCY LANDINGS



EXCEPT IN TAKEOFFS OR
LANDINGS, I MUST FLY HIGH
ENOUGH TO GLIDE CLEAR OF
THIS STUFF, AND NEVER
BELOW 1000 FEET!

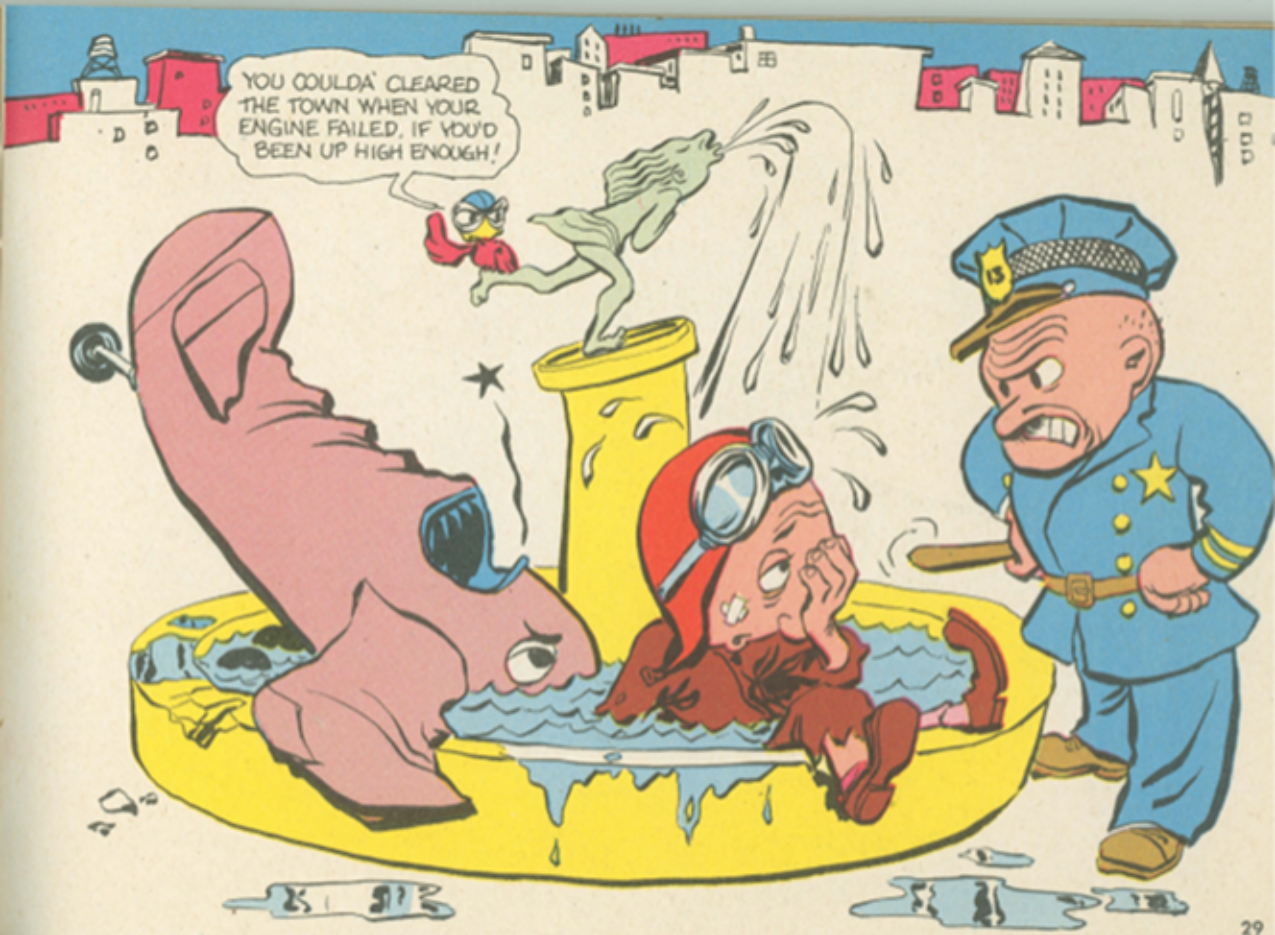
DON'T FLY BELOW THIS ALTITUDE OVER CITIES, OPEN AIR ASSEMBLIES, HOUSES, BOATS, OR VEHICLES

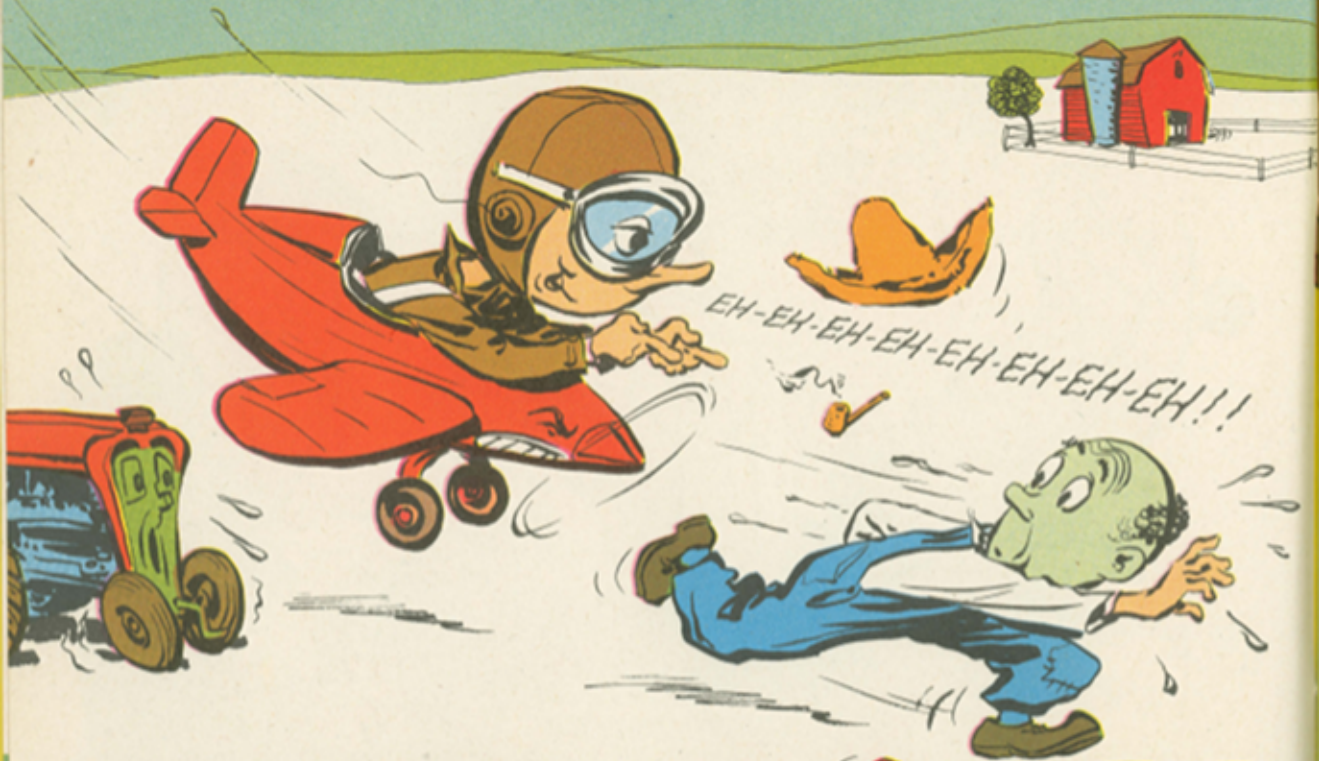
1000 Ft.

1000 Ft.



MINIMUM ALTITUDE: 1000 Feet



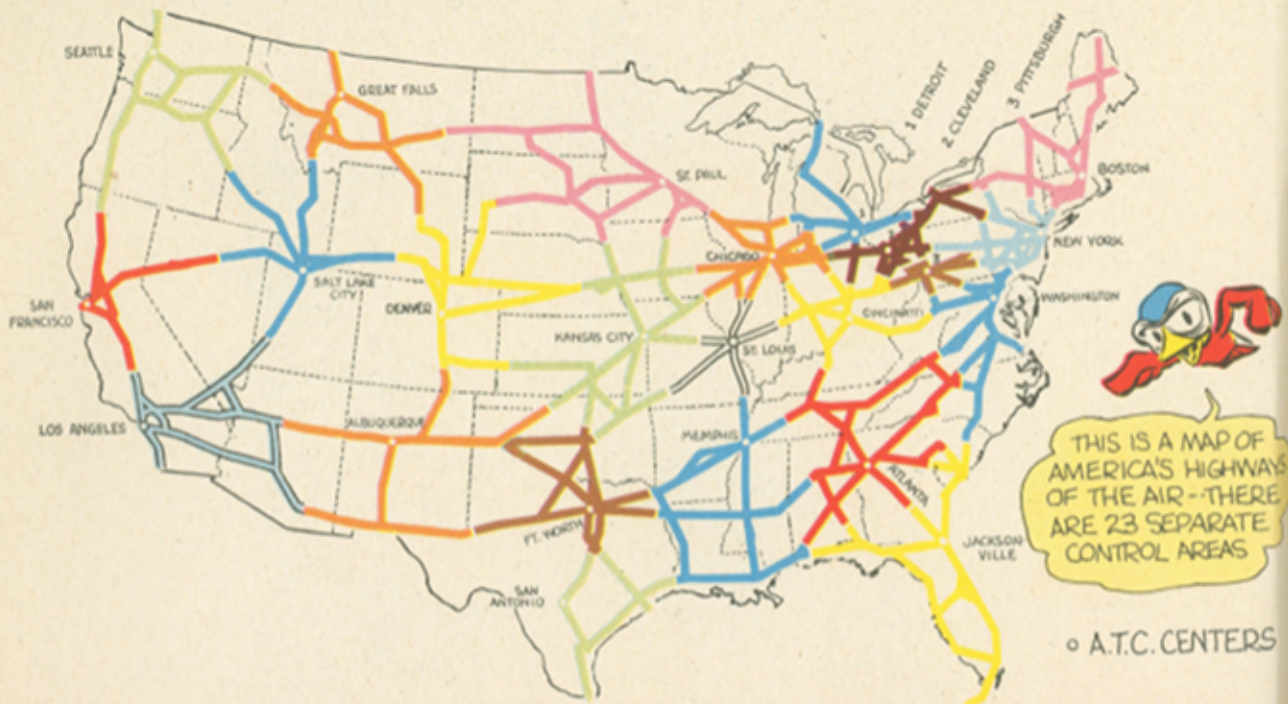


VIOLATION!

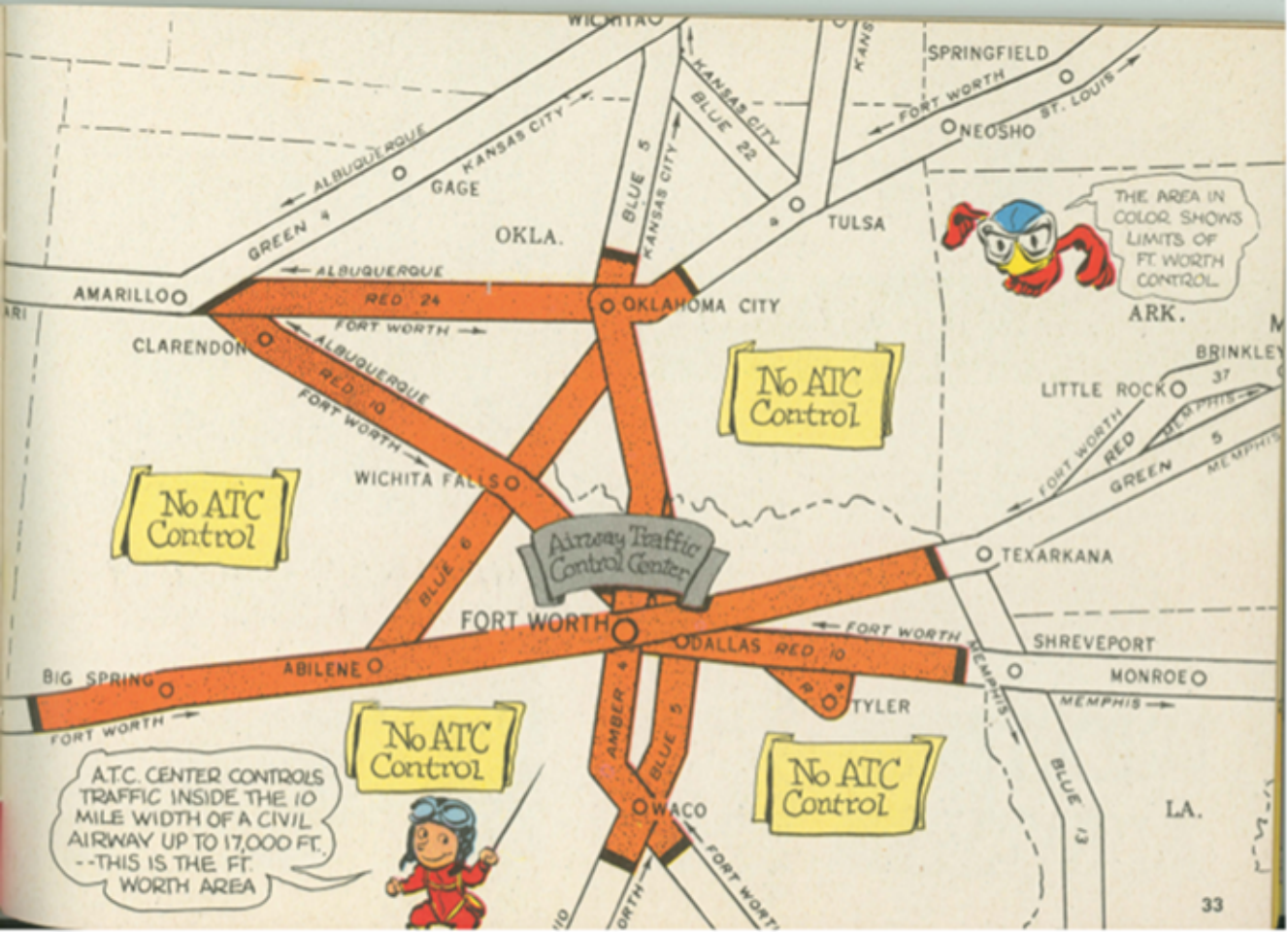
NEVER, NEVER, FLY SO AS
TO ENDANGER FRIENDLY
AIRCRAFT IN THE AIR, OR
PEOPLE AND PROPERTY
ON THE GROUND !!

IT'S IMPORTANT TO KNOW ALL THE
RULES ABOUT FLYING THE AIRWAYS ---
SO WE'RE ON OUR WAY TO LEARN ABOUT
AIRWAY TRAFFIC CONTROL





AIRWAY TRAFFIC CONTROL AREAS of U.S.



I GET PRIORITY
OVER OTHER PLANES
'CAUSE I'M ON A
GREEN AIRWAY



PLANES ON AMBER,
RED, OR BLUE
AIRWAYS MUST
GO UP 500 FT.
WHEN CROSSING
A GREEN
AIRWAY

PRIORITY
SOUTH

PRIORITY
AND SOUTH

I'M ON A RED AIRWAY, SO I
CRUISE OVER BLUE AIRWAY
WITHOUT CHANGING ALTITUDE,
BUT I MUST GO UP 500 FT.
TO CROSS AMBER AIRWAY

GREEN AIRWAY • NO.1 PRIORITY
PRIMARY ROUTES EAST AND WEST



NO.4
NORTH

AMBER AIRWAY • NO. 2
PRIMARY ROUTES NORTH AND

RED AIRWAY • NO.3 PRIORITY
SECONDARY ROUTES EAST AND WEST

**PRIORITY of
AIRWAYS**

BLUE AIRWAY
SECONDARY ROUTES

AIRWAY PRIORITIES
DETERMINE WHICH ONE
HAS RIGHT-OF-WAY





AY VANT TO BE ALONE

"O" MEANS "OFF
THE AIRWAYS"-- NO
PRIORITY!



G

GREEN

1

A

AMBER

2

R

RED

3

B

BLUE

4

O

THIS IS HOW
I REMEMBER
PRIORITIES
OF AIRWAYS



A.T.C. CLEARANCE

APPROVAL REQUESTED, NC18432,
DOUGLAS SMITH, NEW HACKENSACK,
4000 FEET, NEWARK, PHILADELPHIA,
RICHMOND--SPEED 160, RADIO 3105,
PROPOSED DEPARTURE 0930*
ELAPSED TIME 2+20--
ALTERNATE, WASHINGTON--

Operations
Office

Flight
Plan

*9:30 AM

1. Flight plan filed with AIRWAY TRAFFIC CONTROL Center

3. Airport tower reports departure



ATC
Center

NC18432 CLEARED FROM
NEW HACKENSACK OVER
NEWARK AND PHILADELPHIA
TO 25 MILES SOUTHWEST OF
PHILADELPHIA, TO CRUISE AT
4000 FEET--CLEARANCE
VOID IF AIRCRAFT NOT OFF
GROUND BY 0935*



*9:35 AM

2. ATC clears the flight

4. NC18432 is on his way at 4000 feet!



THE RADIO RANGE
STATION SENDS SIGNALS
TO GUIDE ME IN
MY FLIGHT

THERE ARE OVER 330
RADIO RANGE STATIONS
ON U.S. AIRWAYS!

This is a
**RADIO RANGE
STATION**



RADIO RANGE STATION

Be guided by your earphones!



I HEAR THE **N** SIGNAL,
DAH-HH-DIT!

I HEAR THE **A** SIGNAL,
DIT-DAH-HH!

I HEAR
DAH-HH!

I HEAR
DAH-HH!

ON COURSE

THIS SHOWS
HOW A PILOT
CAN TELL IF
HE'S ON COURSE

AIRWAYS RADIO SIGNALS

WE GOTTA FLY ON THE RIGHT
SIDE OF AN "ON COURSE" SIGNAL,
OR A CENTER LINE OF
AN AIRWAY--

UNLESS THE
CONTROL CENTER
TELLS US
OTHERWISE

THESE FIVE TOWERS
ARE GROUPED TO FORM
THIS COMBINATION OF
SIGNALS--THE RED RAYS
ARE ON COURSE BEAMS
NO SIGNAL--JUST "DAH!"

DAH-H-DIT
DAH-H-DIT

PIT-DAH-H
PIT-DAH-H

THE SUREST WAY
TO STAY ON MY COURSE
IS TO FOLLOW THE RIGHT
SIDE EDGE OF AN ON
COURSE "DAH-HH!"



ON COURSE
"DAH-HH!"

CIVIL AIRWAY

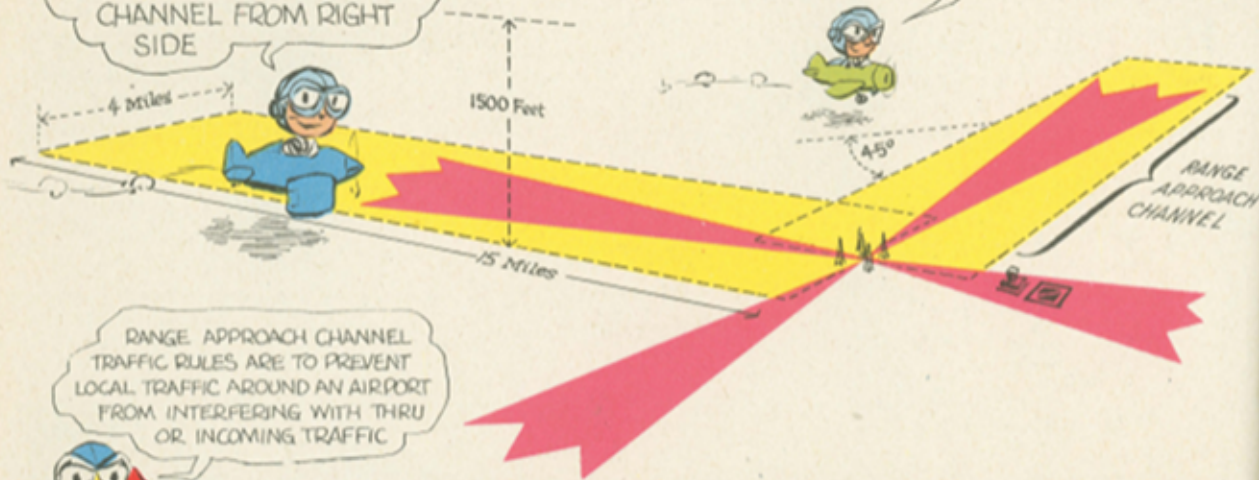
KEEP TO THE RIGHT

JUST LIKE
WHEN YOU'RE
DRIVIN' A CAR!

Keep
to the
RIGHT

I DON'T HAVE A FLIGHT PLAN, SO I MUST STAY UNDER 1500 FT. AND ENTER RANGE APPROACH CHANNEL FROM RIGHT SIDE

I'M OKEH, BECAUSE I'M CROSSING A RANGE APPROACH CHANNEL UNDER 1500 FT. AT AN ANGLE OF 45° OR MORE



RANGE APPROACH CHANNEL Traffic



ODD and EVEN ALTITUDES




I MUST HAVE SUITABLE
RADIO EQUIPMENT FOR THE
TYPE OF FLIGHT THAT I'M
PLANNING TO MAKE


CIVIL AIRWAY

Radio Range
Station

RADIO EQUIPMENT



WHEN YOUR RADIO GOES ON
THE BUM, ON OR OFF THE
AIRWAY, IT'S WISE TO LAND
AND GET IT FIXED QUICK!



I'M GONNA LAND AS
QUICK AS I CAN, BECAUSE
IF I RUN INTO ANY BAD
WEATHER, I'LL BE WITHOUT
RADIO COMMUNICATION

RADIO FAILURE

TO CROSS
A CIVIL AIRWAY,
I MUST FIRST GO UP 500
FEET HIGHER THAN MY
CRUISING ALTITUDE--

500 Ft.

Cruising Altitude

1

CIVIL AIRWAY

THEN I CUT ACROSS
AT AN ANGLE OF 45
DEGREES OR MORE--

45°

CIVIL AIRWAY

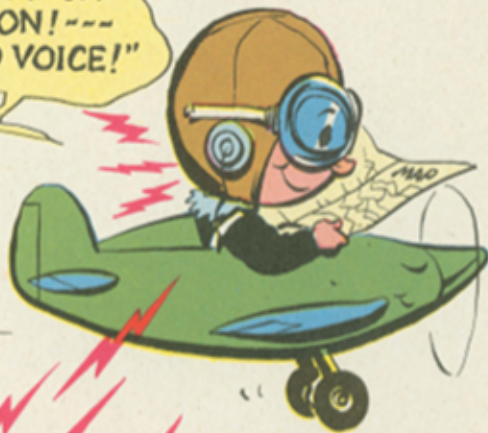
2

AND
RESUME MY
ORIGINAL HEADING
AND ALTITUDE

3

CROSSING AN AIRWAY

A SPUTTER OF DITS
FROM A RANGE STATION
MEANS "ATTENTION!---
SWITCH OVER TO VOICE!"

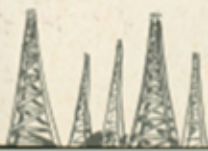


B'LIEVE ME, I DON'T
WANNA MISS ANY
IMPORTANT
MESSAGES!



DIT-DIT-DIT-DIT-DIT-DIT!

 **Attention SIGNAL**



I CAN'T CHANGE MY FLIGHT PLAN
EN ROUTE WITHOUT A.T.C. APPROVAL
UNLESS EMERGENCY OR WEATHER
MAKES ME. THEN I NOTIFY THE
AIRWAY TRAFFIC CONTROL
CENTER RIGHT AWAY!

Original Approved Altitude



LET A.T.C. KNOW BY RADIO
THROUGH THE NEAREST
COMMUNICATIONS STATION

FLIGHT PLAN CHANGE



MOST OF A PILOT'S FLIGHTS ARE
MADE IN ACCORDANCE WITH

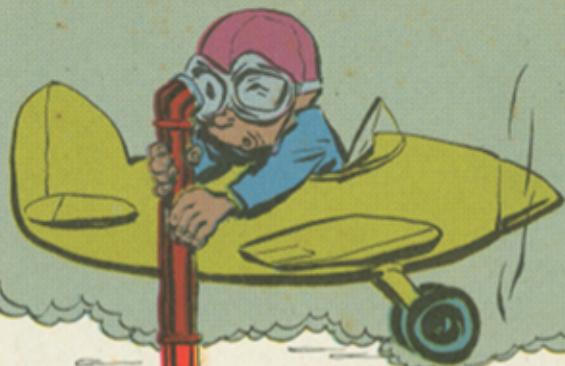
CONTACT FLIGHT RULES



LET'S LEARN
ABOUT 'EM!




OVERCAST



IT'S JUST A
LOTTA BULL!

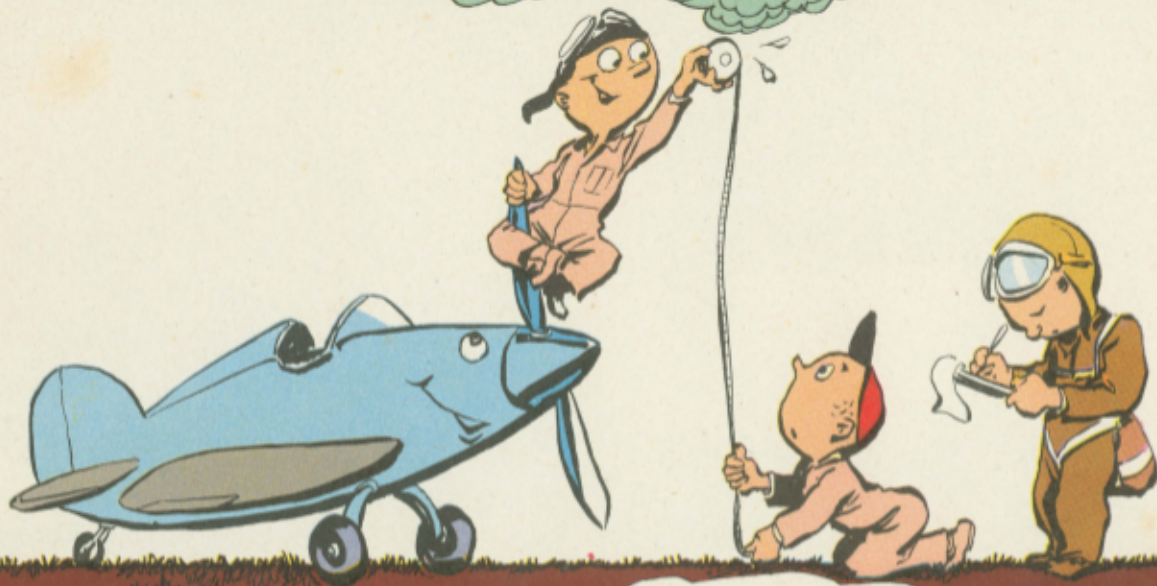
THIS IS NOT CONTACT FLIGHT





THIS IS CONTACT FLIGHT
BECAUSE I CAN ALWAYS
TELL WHERE I AM BY
LOOKING AT THE
GROUND OR WATER

THIS IS CONTACT FLIGHT



CEILING

CEILING IS DEFINED
AS THE DISTANCE
FROM THE CLOUD
BASE TO THE
GROUND



Ah! 5-mile visibility!



5 MILES

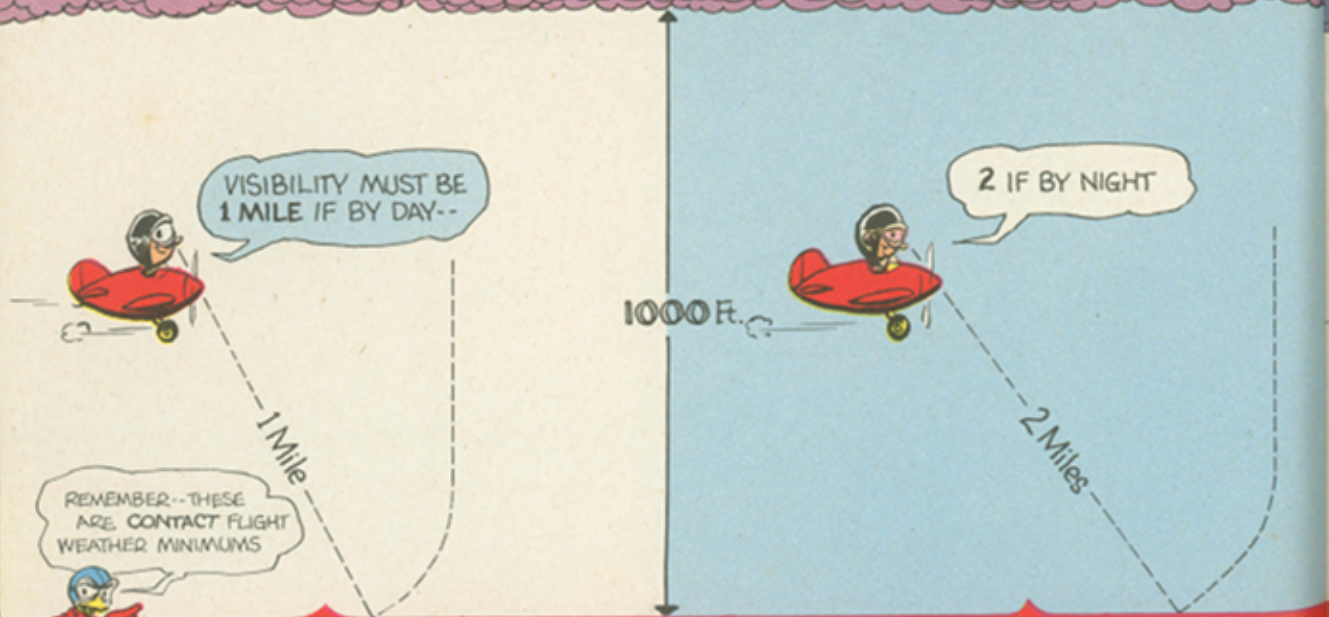
VISIBILITY IS THE
GREATEST DISTANCE AT
WHICH OBJECTS CAN BE
READILY RECOGNIZED
WITH THE NAKED EYE



I'D BE CHEATIN' IF I
USED A TELESCOPE!

VISIBILITY

Day FLIGHT BELOW 1000 FT. Night



WEATHER MINIMUMS *Outside*

FLIGHT ABOVE 1000 FT.

Day or Night

500 Ft.

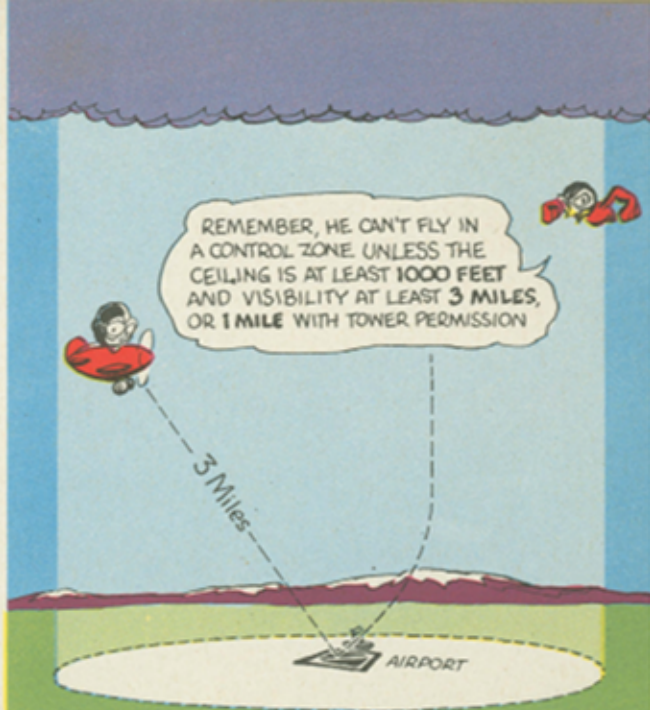
CRUISING ALTITUDE

1000 Ft. Altitude

3 Miles

CEILING MUST BE AT
LEAST 500 FT. ABOVE CRUISING
ALTITUDE-- AND VISIBILITY
AT LEAST 3 MILES
DAY OR NIGHT

Control Zone



Inside Control Zone

EVEN THOUGH I'M IN A SEAPLANE, MY MINIMUM ALTITUDE OVER WATER IS **300 FT.**, BECAUSE I MUST BE HIGH ENOUGH TO LAND SAFELY!



300 Feet

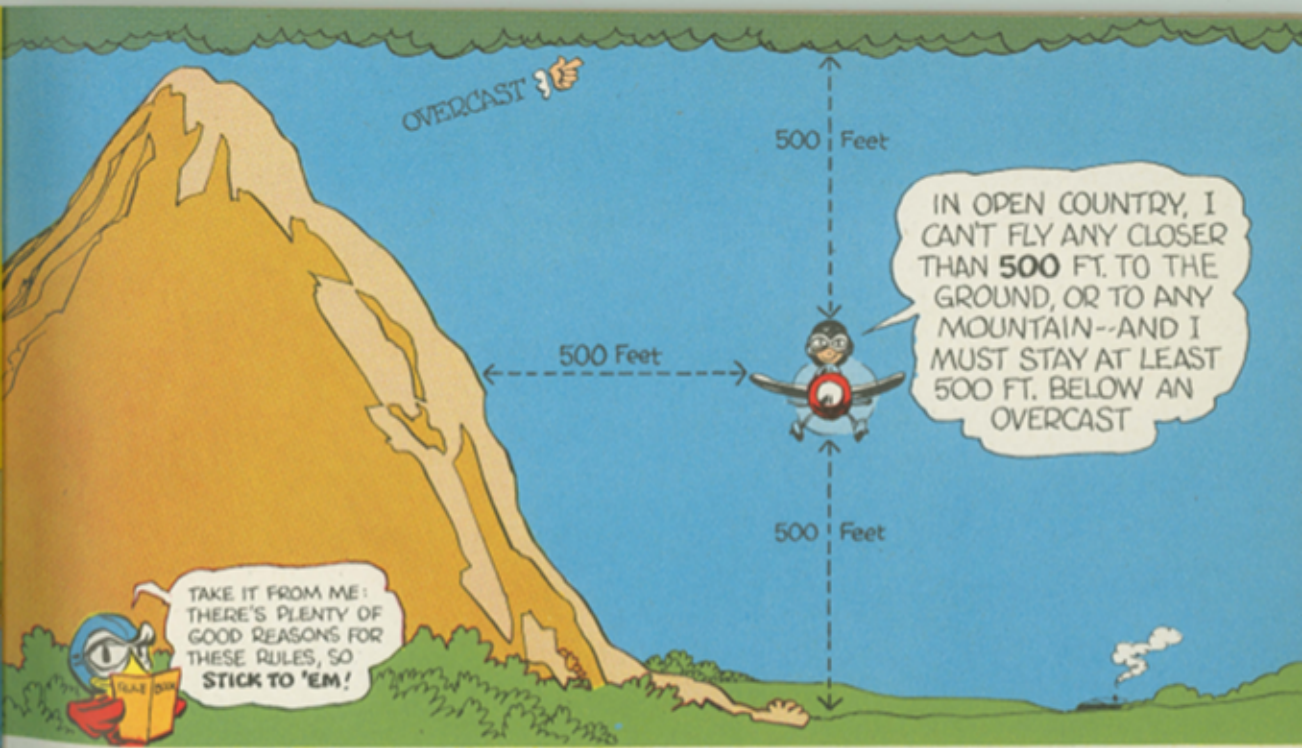


LANDPLANES, LIKE I'M FLYING, HAVE TO STAY AT LEAST **500 FT.** ABOVE WATER

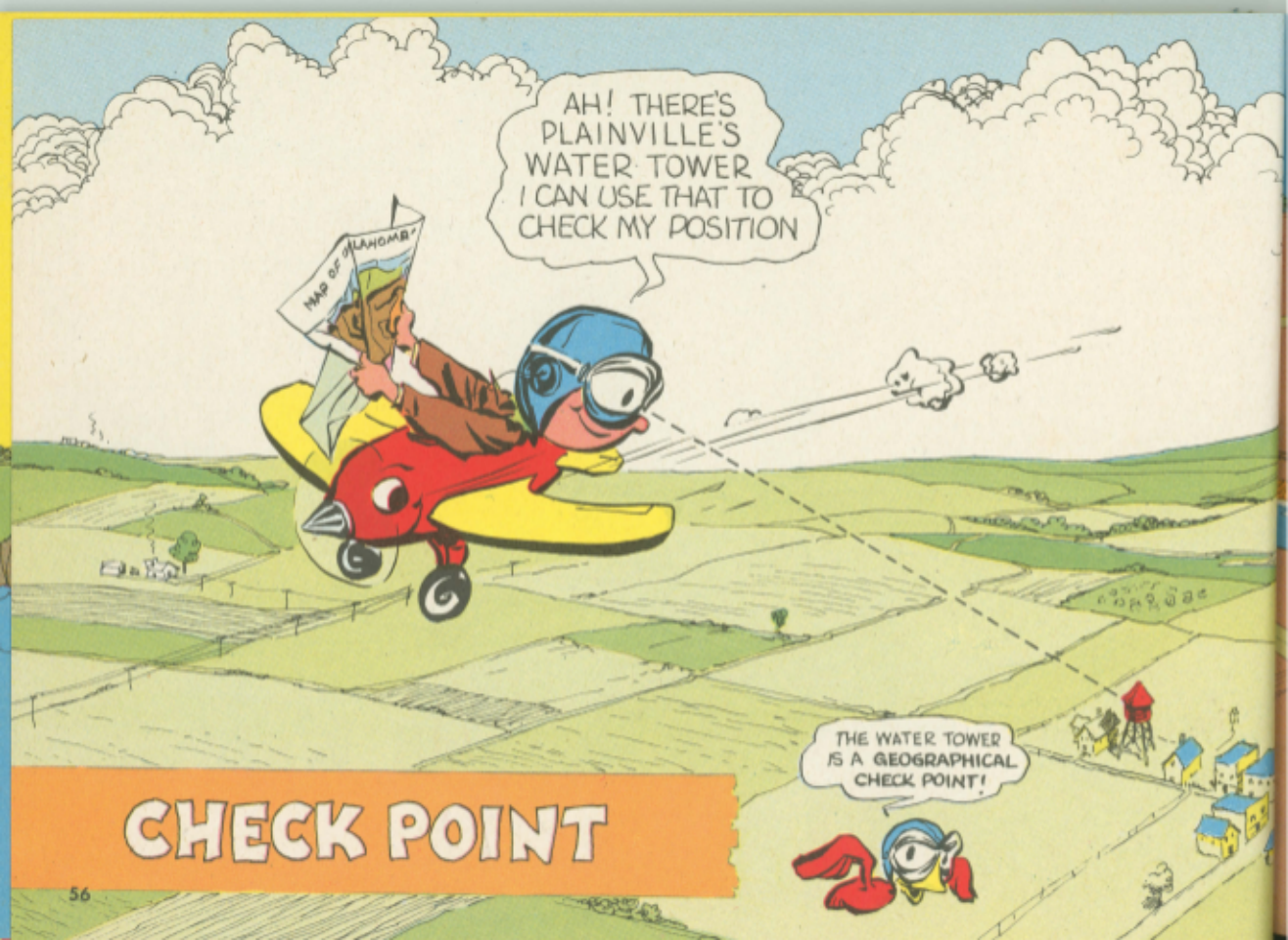
500 Feet



ALTITUDE OVER WATER



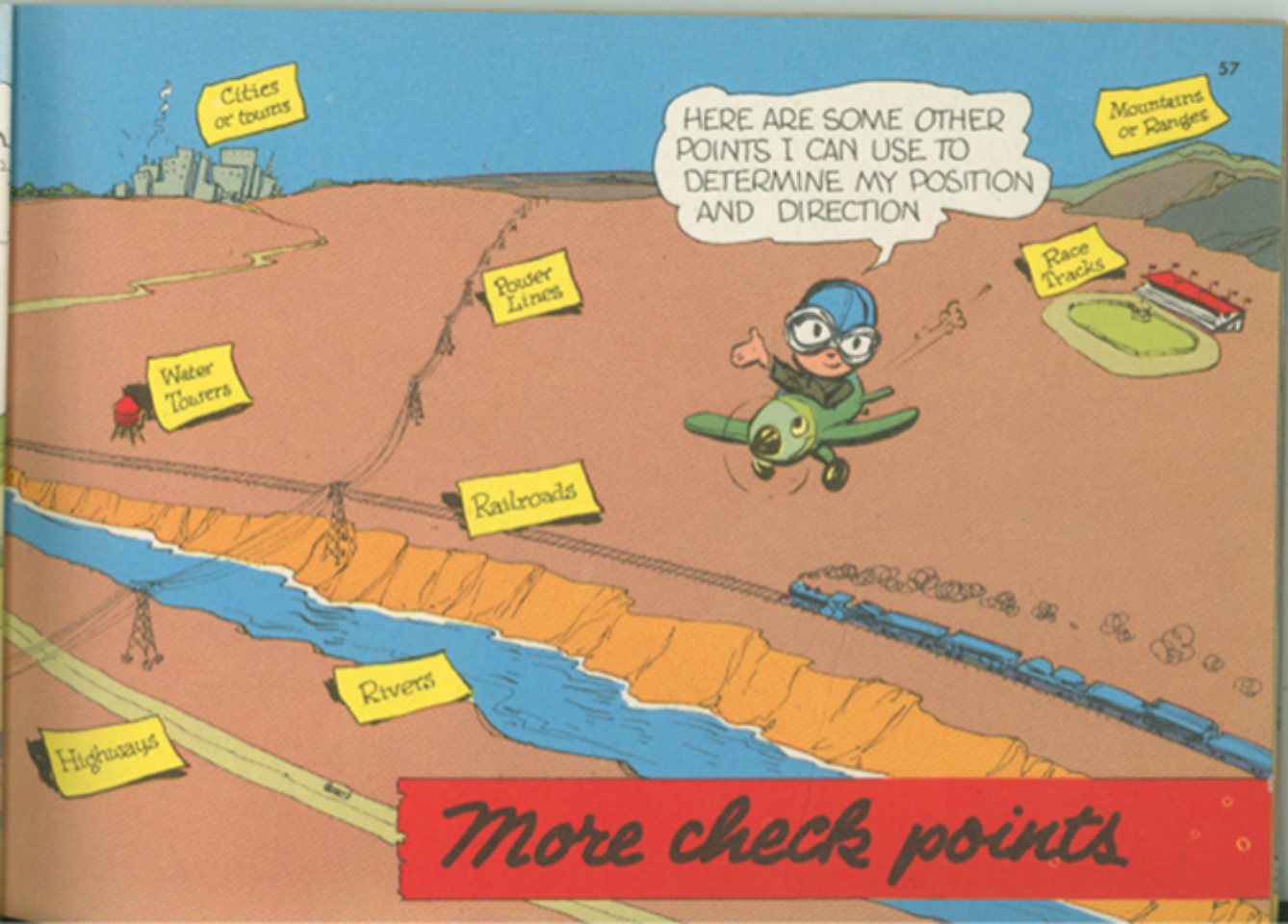
MINIMUM DISTANCE: Open Country

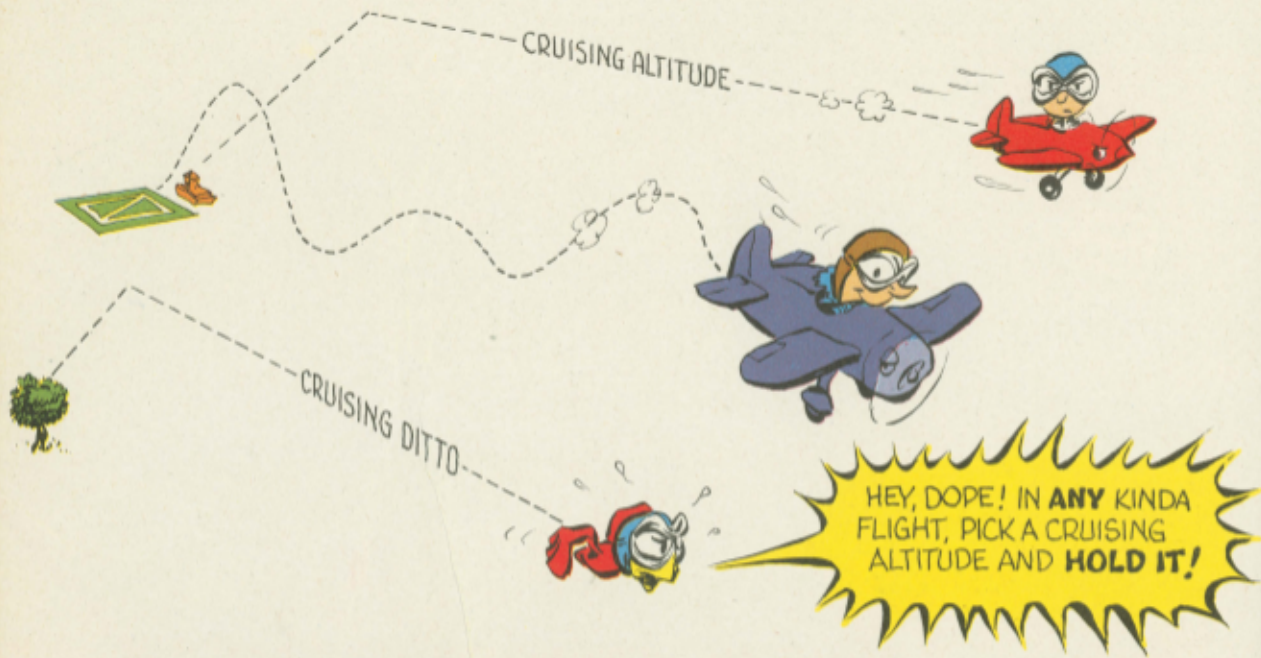


AH! THERE'S
PLAINVILLE'S
WATER TOWER
I CAN USE THAT TO
CHECK MY POSITION

THE WATER TOWER
IS A GEOGRAPHICAL
CHECK POINT!

CHECK POINT





CRUISING ALTITUDE



THIS IS CALLED OVER-THE-TOP
CONTACT FLIGHT, IN WHICH I
HAVE VISUAL REFERENCE TO
THE GROUND AT ALL TIMES
IN SPITE OF CLOUDS

THIS TYPE OF FLIGHT IS NOT
PERMITTED UNLESS YOU CAN
COME DOWN BETWEEN THE
CLOUDS AND MAINTAIN A
DISTANCE OF 2000 FEET
FROM ALL CLOUDS

OVER-THE-TOP FLIGHT

LOOK OUT— THERE MAY BE
AN AIRLINER ABOUT TO BREAK
OUT OF THE OVERCAST



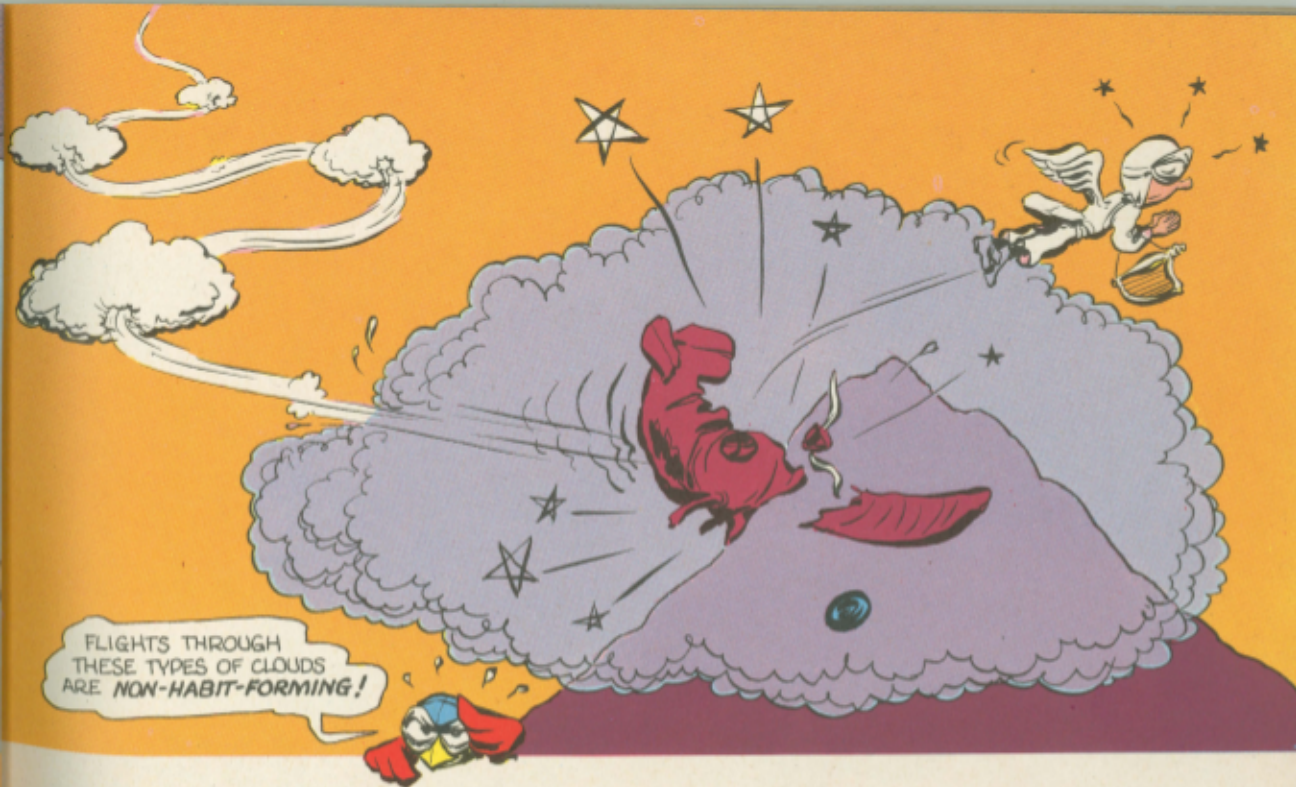
500 Feet

2000 Feet

500 Feet

I DON'T DAST FLY CLOSER
THAN 2000 FT. HORIZONTALLY
TO ANY CLOUD, NOR CLOSER THAN
500 FT. VERTICALLY TO ITS BASE
--UNLESS I HAVE AN
INSTRUMENT CLEARANCE

BEWARE OF CLOUDS *During Contact Flight*



FLIGHTS THROUGH
THESE TYPES OF CLOUDS
ARE *NON-HABIT-FORMING!*

--- They may have a **SOLID CORE!!**

I'M ON A CONTACT FLIGHT RULE (CFR) FLIGHT PLAN AND CAN'T FLY CLOSER THAN 500 FT. TO A CLOUD BASE OR AN OVERCAST

I AM FLYING ON AN INSTRUMENT FLIGHT RULE (IFR) FLIGHT PLAN I MAY FLY CONTACT AS CLOSE TO AN OVERCAST AS I WISH, AND I'M STILL "CONTACT" AS LONG AS I CAN SEE THE GROUND OR WATER

500'

CONTACT---

I CAN CONTINUE THROUGH
OVERCAST BECAUSE I'M
ON AN INSTRUMENT
FLIGHT PLAN



I MUST TURN BACK OR GO
AROUND CLOUDS WHEN
FLYING UNDER CFR



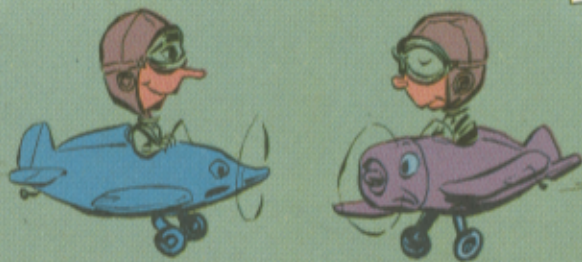
2000'



--- OR INSTRUMENTS

Two fools with a single thought

I AIN'T SUPPOSED TO FLY
CLOSER TO A CLOUD THAN
2000 FT. HORIZONTALLY, BUT
IT NEVER HURT **ME** ANY!



CLOUDS ARE VILLAINS

WHERE'S TH'
CRASH TRUCK?

LISTEN, SWEETHEART...YOU GOTTA
HAVE A **CURRENT INSTRUMENT**
RATING AND APPROVED **FLIGHT**
PLAN TO FLY IN THIS STUFF!



He's right! You shouldn't be here!



THROUGH THE OVERCAST





LEARNED **INSTRUMENT FLIGHT RULES!!**

I GOT MY CURRENT INSTRUMENT
RATING--I GOTTA FILE THIS FLIGHT
PLAN AND GET IT APPROVED
BEFORE I CAN MAKE AN
INSTRUMENT FLIGHT

Hold yer horsepower!

Hurry, Jo!
Let's go!



BEFORE *Instrument Flight*

Identification



Type of Plane



Pilot



Point of Departure



Route and Altitude



Point of First Intended Landing



Air Speed



Radio Frequency



Proposed Departure Time



Elapsed Time



Alternate Airport



Radio Fixes



Remarks



Fuel Supply



INSTRUMENT FLIGHT PLAN

Instrument



I'M ABOVE A SOLID OVERCAST, AND CONTROL THE DIRECTION OF MY COURSE BY REFERRING TO INSTRUMENTS--- THIS IS OVER-THE-TOP INSTRUMENT FLIGHT

OVERCAST

Contact



500 Feet
(minimum)

500 Feet

HE'S FLYING STRAIGHT CONTACT FLIGHT RULES




My Checklist:

1. Weather?
2. Check Points?
3. Radio Facilities?
4. Fuel?
5. Maps?
6. Alternate Airports?
7. Airplane?
8. Myself????

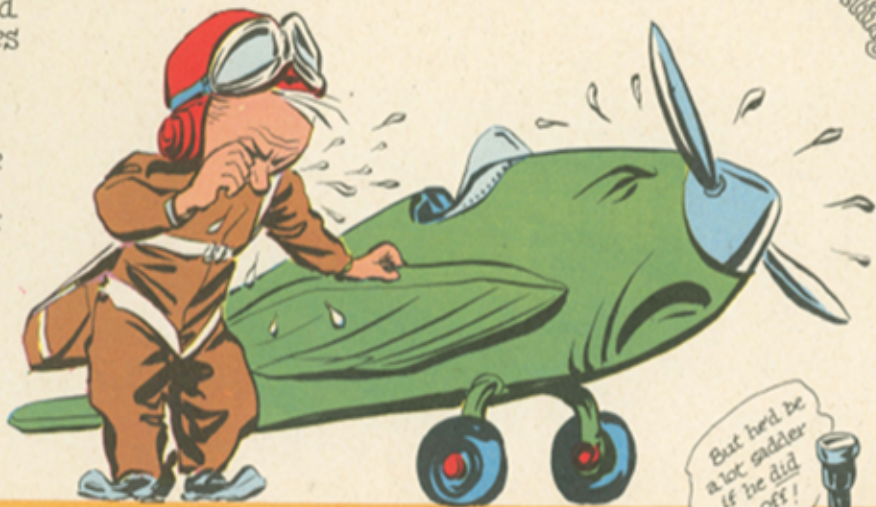


CHECKLIST





This pilot is sad because he loves to fly, but can't take off on instrument flight until the ceiling is at least **500** feet and there's a visibility of **one mile**...



↑ Ceiling 10 Ft.

But he'd be a lot sadder if he did take off!



TAKEOFF *Weather Minimums*



**I CAN'T TAKE OFF ON AN INSTRUMENT
FLIGHT PLAN, UNLESS**

800' Ceiling

THE CEILING AT MY
DESTINATION IS AT
LEAST 800 FEET
WITH 1 MILE
FORWARD VISIBILITY

1 Mile

700' Ceiling

OR 700 FEET
AND 3 MILES--

3 Miles

600' Ceiling

OR 600 FEET
AND 4 MILES--

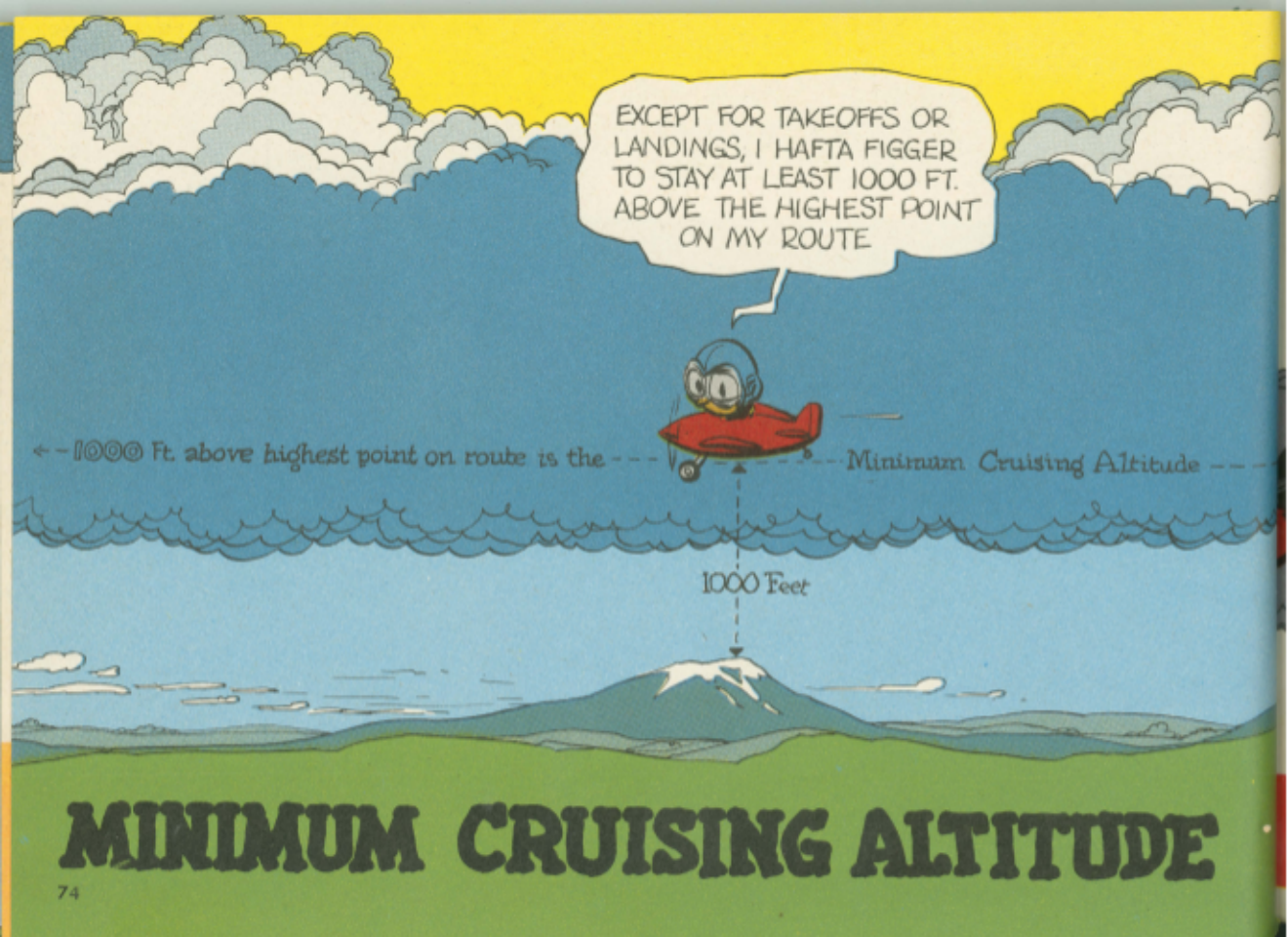
4 Miles

500' Ceiling

OR 500 FEET
AND 5 MILES

5 Miles

INSTRUMENT *Clearance Minimums*



EXCEPT FOR TAKEOFFS OR
LANDINGS, I HAFTA FIGGER
TO STAY AT LEAST 1000 FT.
ABOVE THE HIGHEST POINT
ON MY ROUTE

← 1000 Ft. above highest point on route is the --- Minimum Cruising Altitude ---

1000 Feet

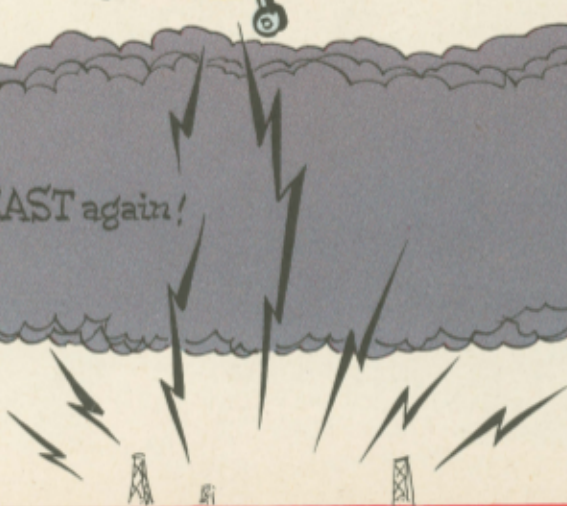
MINIMUM CRUISING ALTITUDE



I CAN FIND MYSELF BY
TUNING IN ON A
RADIO FIX!



Here's that **OVERCAST** again!



WHERE AM I?

No signal in here

I'M IN A CONE OF SILENCE FIX----I FOLLOW THE SIGNAL FOR "ON COURSE" UNTIL IT STOPS FOR A MOMENT. THEN I KNOW I'M OVER RANGE STATION "X"

I JUST PASSED A FAN MARKER FIX -- BY CHECKING MY MAPS, I KNOW I AM NOT FAR FROM RADIO RANGE STATION "X"

RADIO FIXES ARE SIMPLY PLACES ON AN AIRWAY WHERE VARIOUS TYPES OF RADIO SIGNALS ARE USED TO CHECK YOUR POSITION

A PILOT MUST REPORT TIME AND ALTITUDE OVER EACH RADIO FIX !

Range Station
or X

CIVIL AIRWAY

STATION

RADIO FIXES

THIS IS AN INTERSECTION
FIX--I AM FLYING ON A LEG
OF "B" AND I'M TUNED TO "X",
--I KNOW MY POSITION AS
SOON AS I CROSS THE ON
COURSE LEG OF STATION "X"




SOME STATIONS HAVE
A Z-TYPE MARKER
FIX, THE SIGNAL OF
WHICH I GET JUST
BEFORE ENTERING
THE CONE OF SILENCE
--THEN I'M RIGHT
OVER STATION "B"

Cone of Silence
Z-Type Marker



Leg
AIRWAY
STATION X's On Course Leg
CIVIL
B's On Course



IF MY RADIO GOES
ON THE FRITZ, I HAVE TO DESCEND
TO WHERE I CAN FOLLOW CONTACT
FLIGHT RULES--OR LAND AT THE
FIRST CONTACT AIRPORT

500 Ft.
or more,
as usual.

RADIO TROUBLE?

PULL 'ER UP, BUTCH! YOU'RE NOT ALLOWED
TO LET DOWN THROUGH AN OVERCAST EXCEPT
OVER A RANGE STATION, UNLESS YOU HAVE
EXCELLENT KNOWLEDGE OF THE TERRAIN
AND CAN DEFINITELY LOCATE YOUR
POSITION BY RADIO!!



HOW *Not* TO "LET DOWN"!

↑
This is,
of course,
the overcast.....

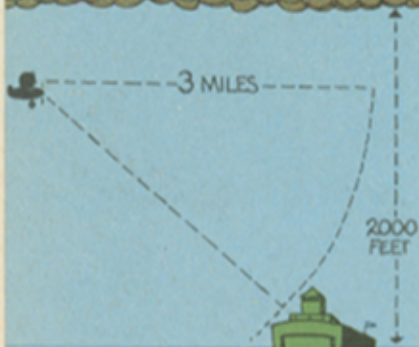
I CAN USE AN AIRPORT AS MY ALTERNATE IF IT HAS A RADIO DIRECTIONAL RANGE, A CEILING OF 2000 FEET, AND 3 MILES FORWARD VISIBILITY--

-- OR A CEILING OF BROKEN CLOUDS AT 1500 FEET AND 3 MILES FORWARD VISIBILITY

WITHOUT THE RADIO DIRECTIONAL AID, MY ALTERNATE AIRPORT MUST HAVE AN UNLIMITED CEILING AND A FORWARD VISIBILITY OF 3 MILES

With RADIO DIRECTIONAL RANGE

this or this

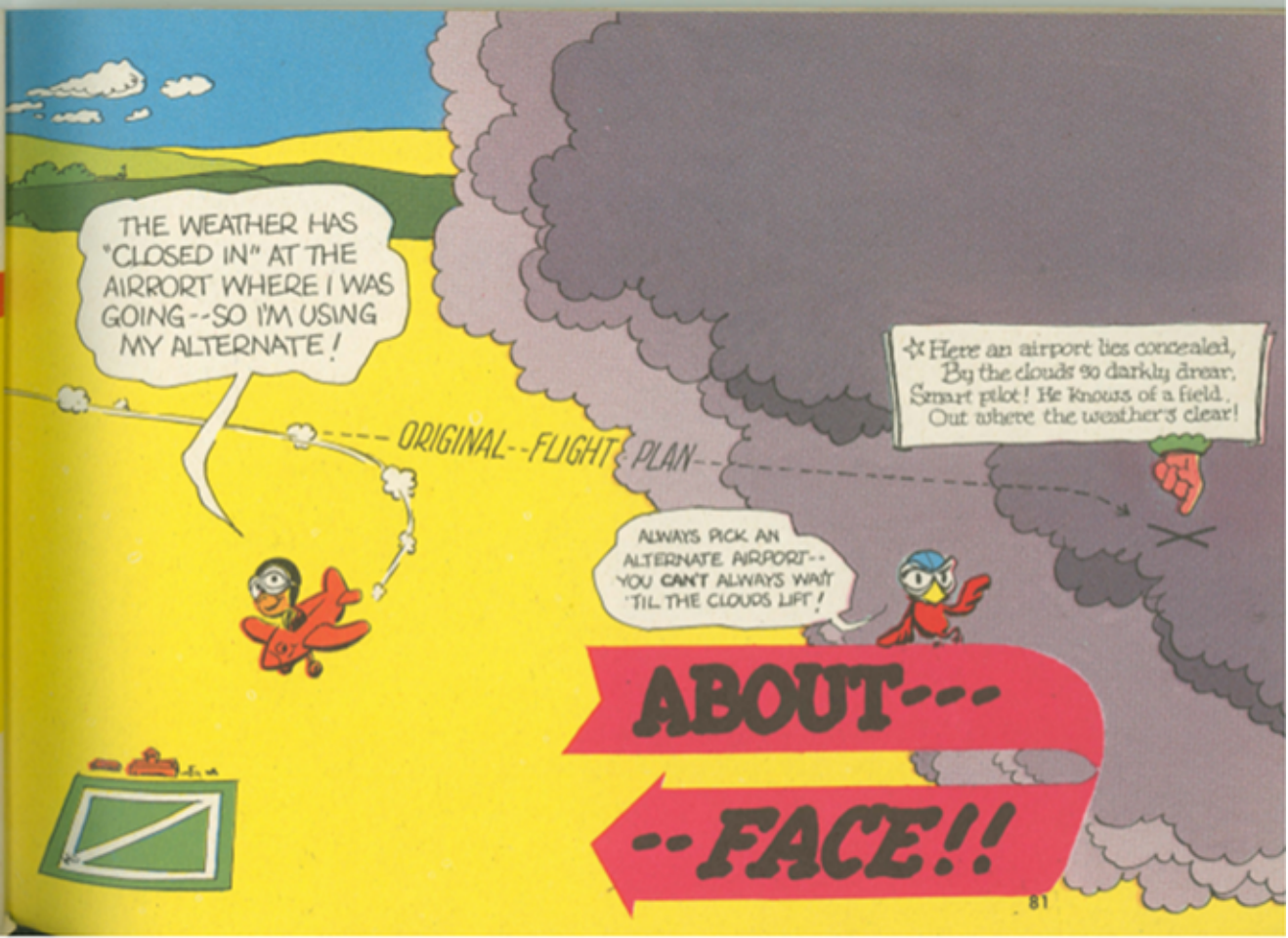


Without R.D.R.

Ceiling Unlimited!



ALTERNATE AIRPORT *Weather Minimums*



THE WEATHER HAS
"CLOSED IN" AT THE
AIRPORT WHERE I WAS
GOING--SO I'M USING
MY ALTERNATE!

ORIGINAL--FLIGHT PLAN--

ALWAYS PICK AN
ALTERNATE AIRPORT--
YOU CAN'T ALWAYS WAIT
'TIL THE CLOUDS LIFT!

☆ Here an airport lies concealed,
By the clouds so darkly drear.
Smart pilot! He knows of a field,
Out where the weather's clear!

ABOUT---

--FACE!!

DIS BOID FILED A
FLIGHT PLAN, AN'
DIDN'T LET US
KNOW WHEN HE
LANDED HERE
AT DE FINISH
OF HIS FLIGHT!
AN' ARE WE
BOINED UP!

CENSORED

I BEEN SEARCHIN' FER THIS
MUG OVER TWO HOURS !! @*!!
--MEBBE HE DONT KNOW HE'S
GONNA BE HOOKED FER TH'
BILL-- BUT HE

IS!

FILING AN ARRIVAL

DON'T GET STUCK!
FILE YOUR ARRIVAL
TIME!!

Obviously, he didn't!

I'M MAKIN' A NOISE LIKE A
FOG HORN FOR FIVE SECONDS
EVERY MINUTE, 'CAUSE I'M
PARKED ON THE WATER

OKAY, THIS TIME--BUT
REMEMBER, PAL, I'M
SUBMITTING TO THIS--**HONK!**
ONLY IN THE INTEREST
OF SAFETY EDUCATION--
NEXT TIME GET A
FOG HORN--

**HONK!
HONK!**

IN FOG OR BAD WEATHER



NO ACROBATICS OVER HERE

3000 Feet
Minimum Ceiling!!

3 Miles
Minimum Visibility!!

1500 Feet
Minimum Pull-out!!

IF YOU'RE GONNA DO ANY
AEROBATICS, REMEMBER
THESE MINIMUMS!


ACROBATIC Weather Minimums

LOOK OUT BELOW!!



SOME NITWIT DISOBEYED THE RULE WHICH SAYS: DO NOT DROP ANY UNAUTHORIZED THING FROM AN AIRCRAFT, OTHER THAN UNCONFINED WATER, FUEL, SAND, OR SHOT, (#7 OR SMALLER)!

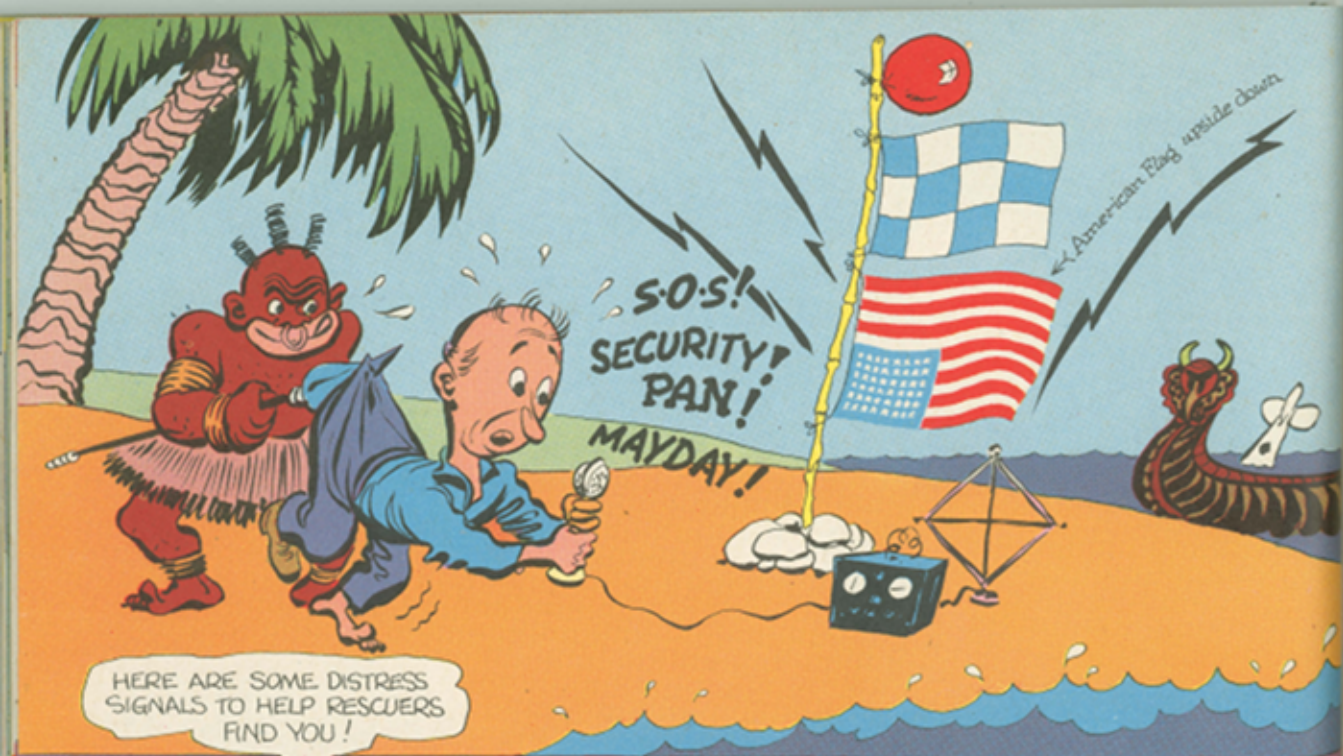




I'M ALL SET FOR NIGHT
FLIGHT--THESE THREE
POSITION LIGHTS MUST BE
ON BETWEEN SUNSET
AND SUNRISE

Z-Z-Z-Z-Z!

LIGHTS AT NIGHT



DISTRESS SIGNALS

TEST YOUR KNOWLEDGE

YOU'VE BEEN THROUGH THIS BOOKLET ONCE. Now study it again. Each time you look at a page you'll find something new that escaped your attention before. When you are satisfied that you have mastered "I've Got Wings," then try your hand at the two quizzes on the following pages.

There are twenty questions in each quiz. Each question is followed by the number of the page containing the correct answer. The correct answers are also listed on page 92.

Each question correctly answered is worth 5 points. A score of 100 is perfect. Good going! Ninety is good. Eighty . . . you're getting wobbly. A good pilot knows all the answers. Dig in. Your wings are worth a lot of work and study.

QUIZ NUMBER 1

True False

- | | | |
|-------|-------|--|
| _____ | _____ | 1. A flashing red light-gun signal means "Taxi back to the hangar." (p. 8) |
| _____ | _____ | 2. I will usually circle the airport to the right. (p. 15) |
| _____ | _____ | 3. An air vehicle that can control itself the most gives way to the one that can control its movements the least. (p. 22-23) |
| _____ | _____ | 4. Eight hundred feet is the minimum altitude over cities, crowds, etc. (p. 28) |
| _____ | _____ | 5. I must alter my course to pass 500 feet or more to the right of overtaken plane. (p. 24) |
| _____ | _____ | 6. When I am in the center of the beam I hear "Dahhh." (p. 38) |
| _____ | _____ | 7. Heading north I fly at an even altitude. (p. 41) |

True False

- | | | |
|-------|-------|--|
| _____ | _____ | 8. I need not keep tuned to control tower after take-off. (p. 21) |
| _____ | _____ | 9. Ceiling is the distance from the top of the clouds to the ground. (p. 50) |
| _____ | _____ | 10. When flying above 1,000 feet, day or night, I must be at least 500 feet below the ceiling and have 3 miles or more visibility. (p. 53) |
| _____ | _____ | 11. CFR over open country I must not fly any closer than 500 feet to the ground, mountains, or the ceiling. (p. 55) |
| _____ | _____ | 12. On instrument flights I must stay at least 500 feet above hills, mountains or water, except for take-offs and landings. (p. 74) |
| _____ | _____ | 13. If my radio goes bad I have to descend to where I can fly CFR or land at the first contact airport. (p. 78) |
| _____ | _____ | 14. You need a 1,000 foot ceiling and 2 miles forward visibility to fly in a control zone. (p. 17) |

True False

- ____ ____ 15. I pick the runway in line with the wind-marker and land with the wind. (p. 18-19)
- ____ ____ 16. When two aircraft approach head-on, they give way to the right to pass each other with 500 feet between them. (p. 26)
- ____ ____ 17. The plane approaching from the right has the right of way. (p. 25)
- ____ ____ 18. The sound of the A signal is "Dit-Dahhh." (p. 38)
- ____ ____ 19. I can fly on either side of an "on course" signal on an airway. (p. 39)
- ____ ____ 20. There are four kinds of airways with different priorities and their colors are green, amber, red, and blue. (p. 34)

QUIZ NUMBER 2

- ____ ____ 1. I can change my flight plan en route by notifying an A.T.C. center through the nearest communication station. (p. 46)

True False

- ____ ____ 2. An airplane has number 3 right-of-way in the air. (p. 22)
- ____ ____ 3. Power lines, bridges, oil wells, rivers, and race tracks are good check points. (p. 57)
- ____ ____ 4. I stay 2,000 feet horizontally from clouds when flying CFR. (p. 60)
- ____ ____ 5. If the ceiling is under 500 feet or the visibility is less than one mile, I can't take off on instruments. (p. 72)
- ____ ____ 6. For an instrument flight, a 600-foot ceiling and 3 miles forward visibility at destination are satisfactory minimums. (p. 73)
- ____ ____ 7. No acrobatics when flying over control zones, cities, crowds, restricted areas, or civil airways. (p. 84)
- ____ ____ 8. I may turn after clearing the airport boundary when I have reached 400 feet altitude. (p. 14)
- ____ ____ 9. To have the right of way in landing I start my approach at least 1,000 feet from the airport boundary. (p. 20)

True False

- ___ ___ 10. Emergency landings have the right of way when a plane is on fire. (p. 27)
- ___ ___ 11. The sound of the N signal is "Dahhh-dit." (p. 38)
- ___ ___ 12. Heading east I fly at an odd altitude. (p. 41)
- ___ ___ 13. In contact flight the pilot controls his flight by reference to the ground or water. (p. 49)
- ___ ___ 14. At night, when flying outside a control zone and below 1,000 feet, I must have a minimum visibility of 4 miles. (p. 53)
- ___ ___ 15. Both land planes and seaplanes are allowed to fly over water at an altitude of 300 feet. (p. 54)
- ___ ___ 16. In contact flight it isn't important to pick any particular cruising altitude. (p. 58)
- ___ ___ 17. When flying contact flight rules I must turn back or go around clouds. (p. 63)

True False

- ___ ___ 18. An alternate airport with a ceiling of broken clouds at 1,500 feet must have 3 miles forward visibility. (p. 80)
- ___ ___ 19. When the weather closes in ahead of me or at my destination—the smartest maneuver I can make is an 180-degree turn (about face). (p. 81)
- ___ ___ 20. I can do acrobatics if I pull out at least 1,000 feet from the ground. (p. 85)

ANSWERS

	Quiz 1	Quiz 2	Quiz 1	Quiz 2
1.	T	T	10.	F
2.	F	F	11.	T
3.	T	T	12.	T
4.	F	T	13.	T
5.	T	T	14.	F
6.	T	F	15.	F
7.	F	T	16.	F
8.	F	F	17.	T
9.	F	T	18.	T
			19.	T
			20.	F



"SLANGUAGE"

Ace—a combat pilot with five or more victories.

Blanket Drill—sleeping.

Blind Flying—a date with a girl you've never seen.

Bumps—the effect of updrafts and downdrafts encountered in flight.

Bunk Flying—talking aviation in quarters.

Buzzing—flying dangerously low over people or property on the ground; (taboo).

Caterpillar Club—a jump for life in a parachute qualifies for membership.

Chinese Landing—one wing low.

Clinker—a poorly executed maneuver.

Conservatory—a power-operated, glass-enclosed machine gun turret.

Contact—a warning called out by the pilot to inform the mechanic the ignition switch is on.

Cracking Good Show—highest possible praise of a performance.

Dead Stick—gliding plane, after the engine has conked.

Dogfight—combat between two planes.

Drive It In The Hangar—stop talking aviation.

Dummer—a bonehead act.

Dust Bin—underside rear gun turret in an enemy aircraft.

Eggs—bombs.

Fat Friends—balloons.

Flak—anti-aircraft fire.

Flying The Iron Beam or Iron Compass—pilot flying along railroad.

Flying Pig—aerial torpedo.

Flying the Gauges—instrument flying.

Gain Some Altitude—come to a more erect standing or sitting position. Used to correct the "civilian slouch" in new cadets.

Geese—enemy bomber formation.

Get Eager—do your best; strive to the utmost.

Give It The Gun—advance the throttle to accelerate engine speed.

Glasshouse—power operated turret.

Go Into A Tailspin—get mad.

Going Upstairs—gaining altitude; climbing.

Good Show—a commendable action.

Grab A Brace—come to a position of super attention; usually directed at new cadets.

Hanger Pilot—mechanic who talks a great flight.

Hedge Hopping—low flying.

He's In A Flat Spin—a bit touched.

Hit The Deck—when an aviator lands.

Hitting The Silk—to make a parachute jump.

Hot Crate—a speedy plane.

H. P.—a hot pilot.

Jinking—dodging anti-aircraft fire.

Lame Duck—damaged plane.

Laying The Eggs—dropping bombs.

Life Saver—a parachute.

Mustard—smart pilot.

Office—the pilot's cockpit, usually in a large airplane.

Onions—flaring anti-aircraft shells.

Overshoot—to glide beyond the landing field before landing.

Pea Shooters—the high-powered planes of the Air Forces.

Pulpit—the cockpit.

Ready Room—the room where pilots on duty assemble, ready for instant call to action.

Reef Back—pull back the stick in flying a plane.

Roll Up Your Flaps—stop talking.

Shoot Landings—to acquire practice in landing a plane.

Short Snorter—a member of an unofficial flyers' club, each member of which carries a one dollar bill autographed by fellow short snorters. Any members being unable to show the bill upon request of a fellow member, must forfeit a comparable bill or note to each short snorter present.

Shot Down In Flames—jilted by a girl friend.

Show—action in the air.

Slap On The Coal—open the throttle to give a plane more gas.

Solo—flying alone; hence doing anything else without company.

Spin Off—take a nap; or go to bed.

Spit Curl—a side slip in a plane.

Sugar Report—a letter to or from a girl friend.

Tear Off A Strip—to give someone a bawling out.

Tin Fish—an aerial torpedo.

Woofing—the telling of tall tales.

Hey! wait for me!

